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County Borough of Blackburn

EDUCATION COMMITTEE

ANNUAL REPORT

OF THE

SCHOOL MEDICAL OFFICER

for the year 1924.

BY

W. ALLEN DALEY,

M.D. B.S. B.Sc.(Lond.), D.P.H.(Cambridge), B.A.
Medical Officer of Health and School Medical Officer.

BLACKBURN:
THE "TIMES" PRINTING WORKS, NORTHGATE.

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MEMBERS OF THE EDUCATION COMMITTEE,

December, 1924.

The Mayor (Councillor J. Stanworth, J.P.)

*Alderman Forrest, O.B.E., J.P. (Chairman of Education Committee).

†*Alderman Keighley, M.D., J.P.

†*Alderman Watson, J.P. (Chairman Elementary Education Sub-Committee).

*Alderman Fielding, J.P.

*Councillor Burke.

†* ,, Makin, J.P.

* ,, Hargreaves.

,, Critchley.

†* ,, Hurley.

* ,, Grimshaw (Vice-Chairman).

†* ,, Charnley, J.P.

,, Ormerod, J.P.

,, Oddie.

* ,, Moffatt, M.R.C.S.

* ,, Sharples.

* ,, B. Holden.

†*Rev. J. E. Samuel, M.A. (Chairman, School Attendance Reference).

†*Rev. D. S. Lees.

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Miss Gardner, M.A.

†*Mrs. H. W. Boddy.

*Rev. Canon Sinker, R.D.

J. Johnson, Esq., J.P. (Co-opted member of the Elementary Education Sub-Committee).

J. F. CARR, B.Sc.,
Director of Education.

SIR LEWIS BEARD,
Town Clerk.

*Elementary Education Sub-Committee.

†School Attendance Reference Sub-Committee.

STAFF OF THE SCHOOL MEDICAL SERVICE.

Medical Officer of Health and School Medical Officer:
W. Allen Daley, M.D., B.S., B.Sc. (Lond.), D.P.H. (Camb.), B.A.

Assistant School Medical Officers:
William M. Frazer, M.B., Ch.B., M.Sc., D.P.H. (Liverpool), Barrister-at-Law.
Ella G. F. Mackenzie, M.A., M.B., Ch.B. (Edin.), D.P.H. (Birmingham).

School Dentist:
Ellina J. B. Thomson, L.D.S. (Glasgow).

Ophthalmic Surgeon (part time):
J. M. Wishart, F.R.C.S. (Edin.), M.B., Ch.B. (Edin.).

School Nurses:
E. Barton. S. N. Hodgson. T. Brothers. A. Garstang.

In Charge of Swedish Remedial Exercises Clinic:
Ida Holmes.

School Clinics.

Name.	Purpose.	Where Held.	Times.
Inspection Clinic.	Special Examination of Cases Referred by Teachers, School Attendance Officers and School Nurses.	Health Department, Town Hall.	Tuesdays, 2 p.m.; Saturdays, 9-30 a.m.
Ophthalmic Clinic.	Prescription of Spectacles.	68, Victoria Street.	Mondays, 1-30 p.m. Fridays, 1-30 p.m.
Dental Clinic.	Dental Treatment.	Health Department, Town Hall.	Every week-day (by appointment).
Minor Ailments Clinic.	Treatment of Minor Diseases of Skin, etc.	68, Victoria Street.	Every week-day, at 8-45 a.m.
,,	,,	119, Bolton Road.	Mondays to Fridays at 3-45 p.m.; Saturdays, 9-0 a.m.
Cleansing Station.	Treatment of Scabies and Cleansing of Verminous Cases.	Throstle Street.	Arranged as required.
Throat Clinic.	Operative Treatment of Adenoids and Enlarged Tonsils (Out-Patients).	Blackburn & East Lancs. R. Infirmary.	Arranged as required.
,,	,, (In-Patients).	Queen's Pk. Hospital.	Arranged as required.
Remedial Exercises.	Treatment of Deformities.	Health Department. Town Hall.	Mondays and Thursdays, 2 p.m.; other times by appointment.*

*Altered in January, 1925, to: Girls, Monday and Thursday, 2 p.m.
Boys, Tuesday and Friday, 2 p.m.

PUBLIC HEALTH DEPARTMENT,
TOWN HALL,
BLACKBURN,
January, 1925.

To the Chairman and Members of the Education Committee of the County Borough of Blackburn.

LADIES AND GENTLEMEN,

I present herewith my Fifth Annual Report, being the 21st of the series, on the Medical Inspection and Treatment of School Children.

The statistics in this Report have been prepared by Mr. Fowler (Chief Clerk), and Mr. Pemberton, and much of the letterpress has been written by Dr. Frazer, for whose valuable cooperation I am much indebted.

It is obvious that the success of the Department depends almost entirely on the efficiency and skill of each of its members, and I have much pleasure in expressing my thanks to them all.

Beyond the appointment of a Dental Attendant and of an Orthopædic Nurse, there has been no important extension of the work during 1924, but as this will be the last Report which I shall have the honour to present to the Blackburn Education Committee, it may not be out of place to review briefly the developments of the School Medical Service which have occurred during the last five years :—

INSPECTION. A new and important group, that of children about to leave school, has been inspected during each of the past three years. Formerly the last examination took place when a child was twelve years old : new defects might develop in the one or two remaining school years, and thus information supplied to the Juvenile Employment Department immediately before the child left school at fourteen was out of date. Now the Juvenile Employment Officer has up-to-date information as to any disability in a child about to leave school, which would make it inadvisable for him or her to enter any particular employment.

Formerly children under five years of age were examined only in a very cursory fashion: it is at the ages of three and four years that the beginnings of serious diseases are often seen. All children, even if only three years of age, are now examined fully within a few months of their admission to school.

A scheme for the medical examination of the girls and boys attending the High School and the Grammar School was put into operation in 1921.

For the past four years routine inspections of all the children have been made in the schools by the School Nurses. The special object of these visits has been to improve the standard of cleanliness: 25,076 examinations for uncleanliness were made by the School Nurses in 1924.

Treatment. In 1919 the only treatment provided was for minor ailments. There were, during that year, 103 cases, and they made 1,337 attendances. There are now two clinics for minor ailments, one at 68, Victoria Street, which has been provided because the accommodation at the original clinic in the Town Hall was inadequate, and another at 119, Bolton Road. During 1924, at the two clinics 1,804 children were treated and they made 17,143 attendances.

Since 1920, children suffering from defective vision have been able to have their vision tested and to obtain a prescription for glasses from the Authority's Ophthalmic Surgeon. Spectacles are provided on the instalment system at cost price for those whose parents cannot afford to buy them from an optician. Five hundred and twenty-three children were examined by the Ophthalmic Surgeon during 1924.

The dental service is also new. There was no dental treatment until the Authority employed a whole-time (woman) dentist in March, 1921. A dental clinic has been provided at the Town Hall. The teeth of all children aged 6 to 11 years were inspected by the dentist during 1924: 8,476 children were inspected and 2,613 treated by the School Dentist during that year. It is difficult to realise how much suffering and ill-health have been prevented by this department alone.

In 1919 children suffering from adenoids and enlarged tonsils which required operative treatment had to obtain "recommends" for the Royal Infirmary unless they were numbered amongst the fortunate few who could afford private treatment. All arrangements for treatment at public institutions are now made by the Education Committee. The parent signs a form indicating preference either for out-patient treatment at the Royal Infirmary or for in-patient treatment at the Queen's Park Hospital, and sends it to the School Medical Officer. During 1924, 142 children were operated upon at the Royal Infirmary and 51 at the Queen's Park Hospital.

Another new provision is that of a remedial exercises clinic for children with slight deformities, such as spinal curvature (postural), flat-feet, insufficiently expanded chests. Although 267 cases made 1,699 attendances during 1924, this clinic has not yet reached its greatest usefulness and will, no doubt, increase its scope considerably now that an Orthopædic Nurse, who is a Remedial Gymnast, has been appointed.

The number of attendances at treatment clinics has increased from 1,337 in 1919 to 25,256 in 1924.

EDUCATION OF THE PHYSICALLY AND MENTALLY DEFECTIVE. The accommodation in day open air schools has been increased from 72 places in 1919 to 130 places in 1924. In addition accommodation has been provided for 20 delicate children in a Residential Open Air School established in May, 1923.

A successful scheme for the treatment, and medical and nursing after-care, of cripples is now in operation, but no provision has yet been made for a day school for the physically defective who are so crippled that they cannot be dealt with at an existing open air class.

MISCELLANEOUS. A considerable amount of health education has been given in the schools during recent years. For over two years courses of instruction in mothercraft have been given to elder girls attending the special housewifery centre.

Much attention has been given to efforts to improve the hygienic conditions of certain of the schools.

This record of progress is undoubtedly good but we must not, however, conclude that nothing further remains to be done: we must not be satisfied until:—

(1) Inspection is so efficient that defects are discovered at their very onset: this entails the closest possible co-operation between teachers and the school medical staff and a fuller use of special examinations in schools and the inspection clinic.

(2) Provision of immediate treatment for all in need of it who cannot afford private treatment. A most serious fault at present is the long waiting-list of cases for throat operations. This is due to shortage of accommodation at both the Queen's Park Hospital and the Royal Infirmary. The dental work is growing and further professional assistance is needed in this department.

One or two additional minor ailment clinics are needed to serve the out-lying areas and another School Nurse would be required to staff them.

(3) A need of considerable urgency is a day school for the physically defective, and, in conjunction with this, there might be a large open air school for delicate children to take the place of at least some, and possibly all, of the existing day classes. This would enable the children to be grouped into classes containing pupils of similar educational attainments. A difficulty with regard to such a centralised school would be that of transport of the children from and to their homes.

(4) There is no need to stress the importance of a ceaseless endeavour to make the schools object lessons of what sanitary, hygienic buildings should be. This is not entirely a matter of structure: good buildings can be made unhygienic if proper attention is not paid to ventilation and cleanliness. The evil effects of poor buildings can be lessened if great care is taken to make the best of the difficulties.

It is my pleasant duty to acknowledge again my indebtedness to the present Director of Education (Mr. J. F. Carr), to his predecessor (Mr. A. H. Whipple), and to various members of the Education Office staff for the advice and assistance I have received from them and for the very large amount of information which they have so willingly supplied for inclusion in this Report.

In conclusion I beg to thank most warmly all the members of the Education Committee and especially the Chairman and Members of the School Attendance Reference for the unfailing support which they have given to my recommendations during the period that I have been privileged to be their School Medical Officer.

I am, Ladies and Gentlemen,

Your obedient Servant,

W. ALLEN DALEY,

School Medical Officer.

COUNTY BOROUGH OF BLACKBURN.

Table 1.

Number of Schools and Children.

There are 14 Council and 32 Non-Provided Schools in the town; the following table gives particulars of the attendance during 1924:—

	No. of Schools	No. on Rolls	Average Attendance	*Percentage Attendance
Church of England	25	8642	7404	*85.6
British School	1	401	342	*85.2
Roman Catholic	6	3526	3063	*86.8
Council Schools	14	4953	4301	*86.8
Totals	46	17522	15110	*86.2
Boys' Schools		2838	2601	91.6
Girls' Schools		2873	2595	90.3
Mixed Schools		6389	5809	90.9
Infants Over Five		3535	4105	*75.7
Infants Under Five		1887		
Total for 1924		17522	15110	*86.2
Figures for 1923		17964	15851	*88.2
,, 1922		18250	16039	*87.8
,, 1921		18617	16112	*86.5

* Excluding Children under five years of age.

The decrease in the number on the school rolls still continues. In 1918 the birth-rate in Blackburn reached its lowest point, 12.4 per 1,000 of the population. The birth-rate was 14.0 in 1919 and 22.1 in 1920. As a consequence of this the number of entrants is now beginning to increase. At the end of 1924 there were on the rolls of the public elementary schools 1,887 children under five years of age, compared with 1,411 at the end of 1923. The percentage attendance has fallen from 88.2 in 1923 to 86.2 in 1924. There was a slight falling-off in the attendance of the older scholars due to excessive prevalence during November and

December of a mild form of influenza. The average attendance of infants (over five years of age) was only 75.7% compared with 79.2% during 1923. This was due to the large number of cases of measles, chicken-pox and mumps which occurred in the Infants' Departments during the last quarter of the year.

The High School for Girls, including Crosshill Preparatory School, had during 1924 an average attendance of 403 : 120 scholarship holders attend this school. The Queen Elizabeth Grammar School had 496 boys on the roll on March 31st, 1924 : this total included 177 boys who were exempt from the payment of fees. The Education Authority have, at the request of the Governing Bodies, arranged for the medical inspection of the scholars in these two schools. No provision is made, however, for medical inspection by the School Medical Officer's staff at the Convent of Notre Dame Secondary School, where the average attendance was 310 : 106 scholarship holders attend this school.

COST. I am indebted to the Borough Treasurer for the following :—

"The rateable value of the Borough in 1923-24 was £748,697. The gross cost of medical inspection and treatment in both elementary and secondary schools for the twelve months ended March 31st, 1924, was £3,016, compared with £3,221 in the preceding year and £3,999 in the financial year 1922-23. The Government grant was half this expenditure, hence the nett cost to the rates for 1923-24 was £1,508."

The cost of the School Medical Service for 1923-24 per child on the school rolls was 3/5 gross and 1/8 nett and the cost as a decimal part of a penny rate was 1.06 gross and 0.53 nett.

ADMINISTRATION.

STAFF. Miss Brothers resigned her post as School Nurse in November, 1924, on her appointment to the Tuberculosis Department of the Lancashire County Council. Her successor had not been appointed at the end of the year.

In my last Report I referred to the need for strengthening the staff by the appointment of a Dental Attendant to assist the School Dentist in inspections at the schools and in work at the dental clinic, and also by the appointment of an Orthopædic Nurse to take the remedial exercises clinics and assist generally in the scheme for dealing with cripples. These appointments were made in October and December, 1924, respectively: Miss Crook was appointed Dental Attendant; and Miss Randall, Orthopædic Nurse.

PREMISES. The accommodation provided at the Town Hall for the treatment of minor ailments and for the ophthalmic clinic has been unsatisfactory for some time owing to overcrowding at the former and to lack of waiting-room accommodation at the latter. In May, 1924, accommodation for these clinics became available at 68 Victoria Street. The rooms are part of the old Town Hall, and are situated 80 yds. from the present Town Hall, where the school medical staff have their headquarters. The other portions of the old Town Hall are let on leases which have several years yet to run: when these leases expire it should be possible to arrange for the other school clinics, except the suburban treatment centres for minor ailments, to be accommodated there. The rooms now taken over include a waiting-room, a large clinic room 30 ft. by 18 ft. and lavatory accommodation for both patients and staff.

SANITARY CONDITION OF THE SCHOOLS. Considerable attention was paid during the year to an endeavour to improve the sanitary condition of the schools. This work was done in close collaboration with the Director of Education and H.M. Inspector of Schools. Owing to inadequacy of the playground accommodation and the age and unsatisfactory arrangement of the buildings, it is doubtful whether two schools should be allowed to be continued to be used as public elementary schools and it is probable that these two schools will shortly be closed by the Board of Education. In one of them the playground is so small that there are less than 4 square feet for each child for whom the school provides accommodation. A very difficult problem is presented by schools which, although old and unsatisfactory, could, by drastic alteration, be improved so as to reach a reasonable standard. Unless extensive alterations and considerable reductions in the registered accommodation are provided, these schools, too, will have to be closed. There are at least four schools which come within this category. In one of these also the playground is exceedingly small. The accommodation of the two schools which will probably be closed is 1,020, but recently the average attendance has been only 557. The recognised accommodation of the four schools which must be closed unless great improvements are made is 2,997: the average attendance recently has been 2,147.*

Minor improvements have been effected at many of the schools. The roofs, gutters and gullies of all the Council Schools have been cleaned and repaired. Extensive alterations have taken place at Park Road School. These include the re-laying with concrete and coke breeze of the floor of the main room of the Infants' Department and the conversion of the conveniences from the trough system to separate pedestals with a flushing system to each. A portion of the playground at St. Aidan's C.E. School has been levelled and rolled: the heating of the Accrington Road School has been improved: defective drains have been re-laid at Bank Top School, Bangor Street, Blakey Moor, Maudsley Street, St. Bartholomew's, St. James' (Shear Brow), St. James (Black-a-Moor), and St. Stephen's. Plans have now been approved for new conveniences at Christ Church Senior School and the work is about to be put in hand. The boys' conveniences at Christ Church Infant School have been improved and an unsatisfactory urinal at St. Thomas's removed.

In many of the schools there is a very meagre or no provision of wash-hand basins. Where there is a wash-hand basin, there is in some schools no soap and the towel is changed infrequently. In one school where there is neither soap nor towel the Head Master takes the view that the scholars should wash at home and not at school. At this school the hands of many of the boys were noticed to be very dirty. I cannot agree that there is no need to provide facilities for washing in the schools as, apart from children arriving at school dirty, it must frequently happen that the hands become stained with ink, or, during the playing of a ball game in the recess, the scholars' hands often become dirty and should be washed in the school lavatory.

In an increasing number of schools, sanitary monitors have been appointed and toilet paper is now supplied in most of the conveniences.

---

*Since writing the above, an official communication has been received from the Board of Education, to the effect that Maudsley Street School and All Saints' School "appear to be unsuitable for continued recognition and incapable of improvement." The Board also state that St. Alban's School, St. Thomas's School, St. Mary's School, and Emmanuel School "ought not to continue to be recognised in their present condition—at all events for their present numbers—but they might possibly be made suitable either for the same or for reduced numbers, but only by means of large expenditure."

The Schools are better ventilated than they were a few years ago, although further improvements are still necessary in some instances.

MEDICAL INSPECTION.

Routine inspections were made of all children (*a*) at their entrance to school—"entrants": (*b*) at the age of 8 years, that is, children born during the year 1916—"intermediates": (*c*) at the age of 12 years, that is, those born in the year 1912 or those who had not been subjected to routine inspection since reaching their twelfth birthday—"12-year olds": (*d*) those born in the year 1910—"leavers." It will be understood that a "12-year-old" is a child who attained the age of 12 years during 1924: some were only 11 at the time of the examination. Similarly the "intermediates" attained the age of 8 years during 1924: some were only 7 on the day of the examination.

TABLE I.

Return of Medical Inspections.

A—Routine Medical Inspections.

Number of Code Group Inspections.	1924.	1923.
Entrants	1891	1014
Intermediates	1470	1725
Twelve-year Olds	1727	1755
Total	5088	4494
Fourteen-year Olds (Leavers)	1284	1543
Total	6372	6037

B—Other Inspections.

	1924.	1923.
Number of Special Inspections	3371	2206
,, ,, Re-inspections	2079	1826
Total	5450	4032

The great increase in the number of "entrants" examined is due to the fact that in 1924 for the first time a complete routine examination was made of all children in their first term at school and also of all children who attained five years of age during the year. Formerly the "under fives" were examined in a cursory fashion only and the examinations were, therefore, counted as "special inspections." At that time the full examination was deferred till after the child became five years of age. During 1924 there were 782 examinations of children under five and 1,109 of entrants of five years of age and upwards.

SPECIAL EXAMINATIONS. 116 of these took place in school and 3,255 at the inspection clinic.

Table 2.

WORK OF PAST YEARS. The following table shows the number of medical examinations year by year since the inaugura- of the work :—

ELEMENTARY SCHOOLS.				SECONDARY SCHOOLS.		
Year	Routine In-spections.	Special Examin-ations.	Re-exam-inations.	Examin-ations.	Re-exam-inations.	Total.
1908	2118	654	...	...	...	2772
1909	4581	485	...	...	...	5066
1910	7606	385	...	...	...	7991
1911	9064	527	1874	...	...	11465
1912	4972	583	2403	...	...	7958
1913	4763	1630	2227	...	...	8620
1914	5056	883	949	...	...	6888
1915	4968	1523	1789	...	...	8280
1916	4922	1107	2447	...	...	8476
1917	6240	2039	2061	...	...	10340
1918	3053	1656	1588	...	...	6297
1919	7138	1679	1957	...	...	10774
1920	5935	2076	4859	...	...	12870
1921	6045	2102	3536	938	105	12726
1922	6313	2279	2952	361	148	12053
1923	6037	2206	1826	383	38	10490
1924	6372	3371	2079	372	150	12344

PARENTS. Taking the examinations as a whole the percentage of parents present was 23.4 compared with 20.8% in 1923. The number of parents present during the inspection of the youngest children was 41%.

FINDINGS OF MEDICAL INSPECTIONS. The particulars required by the Board of Education in their new official tables are as under :—

TABLE II.

A—RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION IN THE YEAR ENDED 31ST DECEMBER, 1924.

Defect or Disease. (1)	Routine Inspections.		Special Inspections.	
	No. of Defects.		No. of Defects.	
	Requiring treatment. (2)	Requiring to be kept under observation but not requiring treatment. (3)	Requiring treatment. (4)	Requiring to be kept under observation but not requiring treatment. (5)
NO. EXAMINED.	6372		3371	
Malnutrition	22	5	1	...
Uncleanliness (See Table IV., Group V.)	1221	...	45	...
SKIN.				
Ringworm: Scalp	8	...	130	...
Ringworm: Body	2	...	70	...
Scabies	1	...	9	...
Impetigo	30	...	660	...
Other Diseases: (Non-Tubercular)	26	1	117	...
EYE.				
Blepharitis	26	...	64	...
Conjunctivitis	6	...	35	...
Keratitis	...	...	...	...
Corneal Opacities	5	3	4	...
Defective Vision (excluding Squint)	428	265	95	10
Squint	107	4	5	...
Other Conditions	10	1	46	...
EAR.				
Defective Hearing	42	6	13	...
Otitis Media	45	3	59	...
Other Ear Diseases	44	1	60	...
NOSE AND THROAT.				
Enlarged Tonsils Only	88	235	12	5
Adenoids Only	13	11	13	1
Enlarged Tonsils and Adenoids	53	20	30	3
Other Conditions	23	7	18	...
Enlarged Cervical Glands (non-tubercular)	4	36	6	...
Defective Speech	41	10	3	...
TEETH—Dental Diseases (reported by Doctor). For Dentist's Exam'ations see Table IV., Group IV. (Page 51).	980	...	7	...

TABLE II.—Continued.

Defect or Disease.	Routine Inspections.		Special Inspections.	
	No. of Defects.		No. of Defects.	
(1)	Requiring treatment. (2)	Requiring to be kept under observation but not requiring treatment. (3)	Requiring treatment. (4)	Requiring to be kept under observation but not requiring treatment. (5)
HEART AND CIRCULATION.				
Heart Disease: Organic	4	12	9	...
Heart Disease: Functional	...	46	...	...
Anæmia	25	26	33	...
LUNGS.				
Bronchitis	23	90	32	...
Other Non-Tubercular Diseases	2	2	1	...
TUBERCULOSIS.				
Pulmonary:				
Definite	3	3	4	...
Suspected	4	5	5	...
Non-Pulmonary:				
Glands	9	5	9	...
Spine	...	...	...	...
Hip	...	...	2	...
Other Bones and Joints ...	2	1	...	...
Skin	2	1	...	...
Other Forms	3	2	...	...
NERVOUS SYSTEM.				
Epilepsy	...	...	1	...
Chorea	2	1	3	...
Other Conditions	2	1	1	...
DEFORMITIES.				
Rickets	35	16	...	...
Spinal Curvature	90	6	2	...
Other Forms	13	3	2	...
Other Defects or Diseases ...	93	58	155	...

TABLE II.—Continued.

B—NUMBER OF INDIVIDUAL CHILDREN FOUND AT ROUTINE MEDICAL INSPECTION TO REQUIRE TREATMENT (EXCLUDING UNCLEANLINESS AND DENTAL DISEASE).

GROUP 1	Number of Children		Percentage of children found to require treatment 4
	Inspected 2	Found to require treatment 3	
CODE GROUPS.			
Entrants	1891	456	24·1
Intermediates	1470	449	30·5
Leavers	1727	447	25·9
Total (Code Groups)	5088	1352	26·6
Other Routine Inspections	1284	282	21·9
Grand Total	6372	1634	24·1

The striking result obtained from Table II. is that approximately one quarter of the children subjected to routine inspection were found to have some defect for which treatment was required. This is apart from over 600 children who, though not in need of treatment, were found to have some defect which it was necessary to keep under observation and which, if it became worse, would require treatment. These findings apply to children selected, not because of physical defect, but solely because they happen to be of the prescribed ages. It is improbable that more than a very small proportion of these physically defective children would have been medically examined and the defects treated had it not been for the school medical service.

The number of children reported to be in need of treatment was 24.1% this year compared with 14.6% in 1923, 13.6% in 1922, 23.4% in 1921, and 15.1% in 1920. It will be noted that these percentages do not include cases where treatment was recommended solely for uncleanliness or for a dental defect. Since 1921 approximately the same classification of defects has been used except that a slightly wider basis for the reference of cases of defective vision to the Ophthalmic Surgeon was adopted during the latter months of 1924. The increase in 1924 in the number of cases referred for treatment is not necessarily due to a marked deterioration in the physical condition of the children, but may be accounted for to some extent by the alteration in the personnel of the examining doctors. Whether certain defects do or do not require treatment, or, in some cases, even whether or not they exist at all is a matter of opinion: 6,372 children were subjected to routine inspection in 1924 compared with 6,037 in 1923. The more important defects found in those referred for treatment were :—

Table 3.

REFERRED FOR TREATMENT.

	1924.	1923.
Defective Vision (excluding squint)	428	338
Squint	107	34
Defective Hearing	42	15
Middle Ear Disease (Otitis Media)	45	16
Other Ear Diseases	44	19
Defective Speech	41	29
Non-pulmonary Tuberculosis	16	3
Rickets	35	4
Spinal Curvature	90	24
"Other Defects or Disease"	93	13

Although they are not included in Table II.(B), it may be noted here that in 1924, 1,221 children were referred by the Doctor for treatment for uncleanliness, compared with 444 in 1923: also 980 children with bad teeth were referred for treatment from medical inspection in 1924 compared with 131 in 1923. These are mainly children over eleven years of age who are not yet included in the scheme for inspection by the School Dentist.

The following Table gives particulars of all the defects found at routine inspection, whether they were sufficiently serious to require treatment or to be kept under observation or not :—

Table 4.

SUMMARY RELATING TO CHILDREN MEDICALLY INSPECTED AT ROUTINE INSPECTIONS IN THE ELEMENTARY SCHOOLS DURING THE YEARS 1923 AND 1924.

DEFECTS FOUND.

	1924.		1923.	
	No.	Per Cent.	No.	Per Cent.
1. Total number of children medically inspected at routine inspections	6372		6037	
2. Number of children in (1) suffering from :—				
Malnutrition	99	1.6	26	0.4
Skin Disease	69	1.0	43	0.7
Defective Vision (including Squint)	1017	15.9	941	15.5
Eye Disease	72	1.1	43	0.7
Defective Hearing	101	1.5	27	0.4
Ear Disease	123	1.9	51	0.8
Nose and Throat Disease	1326	20.8	1093	18.1
Enlarged Cervical Glands (Non-Tubercular)	1575	24.7	1400	23.1
Defective Speech	67	1.0	41	0.6
Dental Disease (Medical Inspect. only)	3164	49.6	1447	23.9
Heart Disease :—				
Organic	23	0.3	46	0.7
Functional	70	1.1	68	1.1
Anæmia	85	1.3	98	1.6
Lung Disease (Non-Tubercular)	151	2.4	89	1.4
Tuberculosis :—				
Pulmonary (definite)	6	0.1	3	0.05
Pulmonary (suspected)	10	0.1	7	0.1
Non-Pulmonary	29	0.4	12	0.2
Diseases of the Nervous System	6	0.1	1	0.1
Deformities	500	7.8	226	3.7
Other Defects and Diseases	256	4.0	110	1.8

DEFECTS IN THE DIFFERENT AGE GROUPS. Turning to the other and more pleasant side of the picture, I give in the next Table the percentage of children in the different age groups in whom no physical defect, even of a minor character, was found :—

PERCENTAGES WITH NO PHYSICAL DEFECT.

	Entrants.	Eight-yr. Olds.	Twelve-yr. Olds.	Leavers.	Total.
Boys	25	13	26	30	24
Girls	28	17	21	32	24

The figures show that one-quarter of all the children examined had no physical defect at all. This is the same proportion as those who required treatment. We therefore can say roughly that of every four children in the public elementary schools one has no ascertainable physical defect, one has one or more defects (apart from bad teeth or uncleanliness) for which treatment is necessary, and two have some minor defect, which they will grow out of, for which no treatment is required or which cannot be remedied by treatment. Division into age groups lends support to the common experience, that the physical condition of school children is worst at the age of 8 years. The number of healthy children found at the ages of 13—14 years is greater than at any other age, and this is no doubt largely due to the vigorous treatment of the defects found during the early years of the child's school-life. Since a large number of physical ailments of childhood shows no tendency to spontaneous cure, it is evident that but for the efforts of the School Medical Service such ailments would remain and be found, together with defects acquired later, in the older children.

CLOTHING. Of the 6,372 children seen by the Assistant School Medical Officers at routine inspections in only 16 cases (the same number as in 1923), was it necessary to describe the clothing as "dirty." Fifty-four children, 31 of whom were girls, were reported to be poorly clad: this is 0.9% of those examined. In 93.5% the clothing was "good": in 5.4% it was "medium" or "fair." The younger children were clothed better than the older.

FOOTWEAR. Sixty-two per cent. of the children wore good clogs and 36.5% good boots. Clogs were more commonly worn by the younger than the older children. Eighty-two per cent. of the boys under five wore clogs but only 49% of those aged thirteen. Clogs are a much more satisfactory footwear for children than the cheap boots which are being substituted for them in many cases. Only two pairs of clogs were in "bad repair": there were over 27 pairs of boots in this condition. No bare-footed child was seen at routine medical inspections.

NUTRITION. It will be noted in Table 4 that there is an increase from 26 or 0.4% in 1923 to 99 or 1.6% in 1924 of children regarded as "ill-nourished." In 22 of the 1924 cases and in one, in 1923, the Assistant School Medical Officer considered that medical or other treatment was necessary. The increase is possibly due to the recent years of bad trade and extensive unemployment. Possibly it is only an indication of a different standard in the examining Doctors. This doubt as to the meaning of the figures leads to two conclusions :—

1. It is important that there should, as far as possible, be continuity, for some years at least, in the medical staff actually

engaged in medical inspection. If a doctor is to remain long at this work, which, despite its importance, many find to be monotonous and not very interesting, adequate salaries must be paid: otherwise the officers will constantly change in order to improve their financial position.

2. All the schools should be equipped with weighing machines and height measurers so that from the average weights and heights reliable information may be obtained as to the physical progress of the children or the lack of it.

The nutrition of 5.4% of the scholars was regarded as "excellent," 78.8% "good," and 14% "medium."

HEIGHT AND WEIGHT. There were at the end of the year weighing machines and height measurers in 17 schools and at the school clinic. They were provided in 9 schools during 1924. I hope the time is not far distant when every school will have what may aptly be described as "a barometer of fitness."

Altogether 1,515 children were weighed and measured by the School Nurses at routine inspections in 1924. Average heights and weights should only be used for comparative purposes if the averages are based on a large number of units. Average heights and weights of Blackburn children are printed in this Report for those children attaining the ages of 8, 12, or 14 years during 1924. These are grouped together as "intermediates," "12-year olds," and "leavers." The average age at the time of examination would be 8 years and 12 years in the first two groups, but somewhat less than 14 in the last group as the children leave school within a very few weeks of reaching their 14th birthday. This is important when one considers that the published standard heights and weights all give the average height and weight based on age at the last birthday and their 8-year-old group consists of units whose average age is approximately 8 years and 6 months. Further, the Blackburn children who were weighed and measured cannot be regarded as a fair sample of all the children in the Blackburn schools, as the majority of the schools do not yet possess weighing machines. The children whose average heights and weights are given number only 240 in the largest group and 141 in the smallest. The figures are published subject to these reservations and are compared with standards obtained by Mr. Arthur Greenwood in 1913. The standards are based on upwards of 800,000 observations of elementary school children recorded in School Medical Officers' Reports. I also give figures obtained from the Report of the School Medical Officer of Blackburn for

1913. At that time the children were weighed and measured on a machine which was conveyed from school to school. This was given up owing to the cost of transport and to the fact that in conveyance from school to school the machine went out of adjustment. Children over 12 years of age were not weighed and measured at that time.

Table 5.

AVERAGE HEIGHT AND WEIGHT.

"INTERMEDIATES."

No. examined in 1924:	Boys, 141;		Girls, 216.	
	Height in ins.	Weight in lbs.	Height in ins.	Weight in lbs.
Mr. Greenwood's standard—				
Aged 7 years ...	45.0	46.6	44.6	45.0
Aged 8 years ...	47.4	52.2	47.0	49.8
Blackburn Children born in 1916, Measured in 1924 ..	47.6	51.5	47.5	50.0
Blackburn Children who were 7—8 Years old in 1913 ...	44.5	46.3	44.6	45.4
Blackburn Children who were 8—9 Years old in 1913 ...	46.7	51.0	46.4	49.0

"12-YEAR OLDS."

No. examined in 1924:	Boys, 203.		Girls, 240.	
	Height in ins.	Weight in lbs.	Height in ins.	Weight in lbs.
Mr. Greenwood's standard—				
Aged 11 years ...	53.0	66.5	52.8	65.1
Aged 12 years ...	55.0	73.0	55.6	73.9
Blackburn Children born in 1912, Measured in 1924 ..	54.8	72.0	55.3	76.7
Blackburn Children who were 11—12 Years old in 1913..	52.5	66.1	52.0	64.6

"LEAVERS."

No. examined in 1924:	Boys, 168.		Girls, 150.	
	Height in ins.	Weight in lbs.	Height in ins.	Weight in lbs.
Mr. Greenwood's standard—				
Aged 13 years ...	56.0	77.3	57.0	80.4
Aged 14 years ...	58.2	84.3	58.8	88.9
Blackburn Children born in 1910, Measured in 1924 ..	57.8	82.9	58.0	86.7

Conclusions which can be drawn from these figures are that, taking the scholars as a whole, there is certainly no serious under-nourishment. Blackburn children compare satisfactorily with the standards and appear to be taller and heavier than were Blackburn children of the same ages in 1913.

I hope that the Head Teachers who are fortunate enough to have machines in their schools will make full use of them by weighing and measuring their pupils once every term and drawing the School Medical Officer's attention to any child whose weight is more than 10% below the standard for his age and height, or to any child who fails to gain weight.

Cleanliness. The routine inspections record that the hair of 22 boys and 816 girls contained a large number of nits, which are the eggs of lice. The Doctors noted that the bodies of 9 boys and 60 girls were very dirty : 116 boys and 190 girls were flea-bitten. There are many houses in the town where there is no fixed bath, and the question of providing facilities for school children to have cheap hot baths at a public institution is being considered. It is hoped that provision for this will be made early in 1925.

The scheme under which the School Nurses pay surprise visits to the schools and examine all the children for cleanliness has now been in operation four years. The boys showed no improvement between 1921 (81.5% clean) and 1922 (80.7% clean), but in 1923 they were much improved (90.1% clean), and in 1924 they were better still (92.3% clean). The girls, however, who showed considerable improvement in 1922 as compared with 1921 (42.1% clean in 1921, 63.2% in 1922) deteriorated in 1923 (59.6% clean) and in 1924 the figure remained still the same (59.6% clean). Although the girls are much better than when the work was started in 1921 their condition is still very unsatisfactory.

Owing to the growth of the treatment centres the School Nurses have been unable to devote sufficient time to cleanliness inspection in the schools, and this most important branch of their work has perforce been somewhat neglected.

The Nurses have now been relieved, however, of the duty of assisting the School Dentist and during 1925 more time can be devoted to this work.

The following Table gives the result of the first examinations :—

Table 6.

	No. examined	Clean	A few Nits	Numerous Nits	Very numerous Nits	Vermin seen	Skin very dirty
BOYS.							
1924	6,382	5,888	266	66	86	44	32
Per cent. ...		92.3	4.2	1.0	1.3	0.7	0.5
1923	6,456	5,817	290	149	117	83	*
Per cent. ...		90.1	4.5	2.2	1.9	1.3	
GIRLS.							
1924	7,276	4,338	1,367	983	499	89	None
Per cent. ...		59.6	18.8	13.5	6.9	1.2	
1923	7,624	4,545	1,400	1,025	558	96	
Per cent. ...		59.6	18.4	13.4	7.3	1.3	

* Not recorded.

PERCENTAGE WITH CLEAN HEADS.

	Boys.	Girls.
1921	81.5	42.1
1922	80.7	63.2
1923	90.1	59.6
1924	92.3	59.6

The School Nurses made in the schools 25,076 examinations for uncleanliness, compared with 25,014 in 1923, 19,193 in 1922, and 28,623 in 1921. The next Table compares the first with the final examinations in 1924 and shows the results of the Nurses' inspections and visits.

RESULTS OF FINAL EXAMINATIONS.

		A few Nits	Numerous Nits	Very numerous Nits	Vermin seen
Boys, 1924 :	first	266	66	86	44
	final	31	15	7	Nil
Girls : 1924 :	first	1367	983	499	89
	final	768	403	121	12

Forty-four boys and 89 girls were so verminous at the first examination that they had to be excluded from school for a few days. In 1923 the figures were 29 boys and 48 girls.

During 1924 the number of home visits for uncleanliness paid by the School Nurses was 486 compared with 598 in 1923. The number cleansed at the Cleansing Station was 17. The heads of 102 children were cleansed at a Minor Ailments Clinic. The

Authority have purchased 30 Sacker's combs which are lent to mothers who cannot afford to buy one. With the aid of this comb even a very dirty head can be cleansed in a few hours. The combs were lent on 348 occasions.

A useful feature of the Nurses' visits to the schools to examine for cleanliness was the discovery of other conditions which had arisen since the last routine medical inspection. The following is a list :—

Impetigo	150
Eye Diseases	33
Ear Diseases	24
Ringworm	13
Defective Vision and Squint	38
Scabies (the Itch)	3
Other Skin Diseases	16
Miscellaneous	68

These children were referred for treatment to their private doctors or to the Clinics.

NOSE AND THROAT. In 20.8% of the children examined at routine inspections there was some defect of the nose or throat. The percentages with enlarged tonsils were :—Moderate enlargement of both tonsils, 11.7% ; great enlargement of one tonsil only, 1.5% ; great enlargement of both tonsils, 1.8%. Children were not put on the list for treatment solely because of enlargement of the tonsils. In all cases of tonsillar enlargement recommended for treatment the tonsils appeared to the examining Doctor to be unhealthy. This obtained in 141 cases, in 53 of which adenoids were also present. Two hundred and thirty-five cases of tonsillar enlargement were referred for observation. Thirteen children with adenoids only were referred for operative treatment and 11 more are being kept under observation. It is difficult in the course of ordinary routine medical inspection to diagnose adenoids with certainty unless the throat is examined with the finger, and this so frightens a child that it is inadvisable to do so at school. It was noted that in 140 cases submitted to routine inspection an operation on the throat had been performed previously.

In order that parents may understand exactly what is meant by adenoids, the following leaflet has been prepared and distributed :—

ENLARGED TONSILS AND ADENOIDS.

These two ailments very often go together, although some have enlarged tonsils only; others adenoids only.

SYMPTOMS OF ENLARGED TONSILS.

Frequent sore throats; liability to catch cold easily; and sometimes enlarged glands in the neck.

SYMPTOMS OF ADENOIDS.

Running at the nose; inability to breathe through the nose, so that the child becomes a "mouth breather"; snoring at night, with sometimes night-terrors, so that the child wakes up in alarm; and frequently deafness, which comes and goes. Not uncommonly the child has a running from one or both ears. These symptoms disappear when the adenoids are removed.

If enlarged tonsils and adenoids occur together, you will find some of both these sets of symptoms.

AFTER-EFFECTS OF UNTREATED ENLARGED TONSILS AND ADENOIDS.

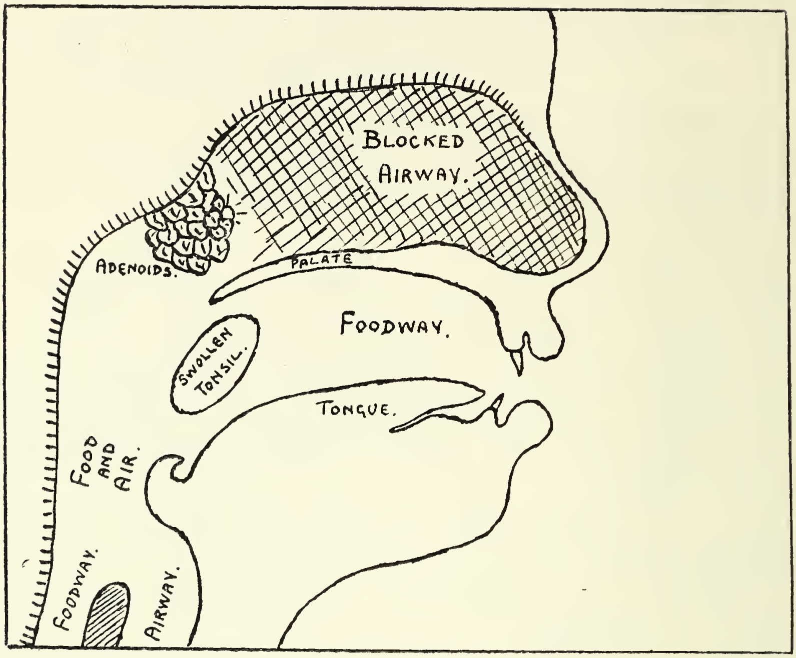
The two diagrams show how these conditions affect the nasal passages and the throat. The explanation of all the symptoms is that there is a blockage of the passages along which breathing takes place, and there is also inflammation.

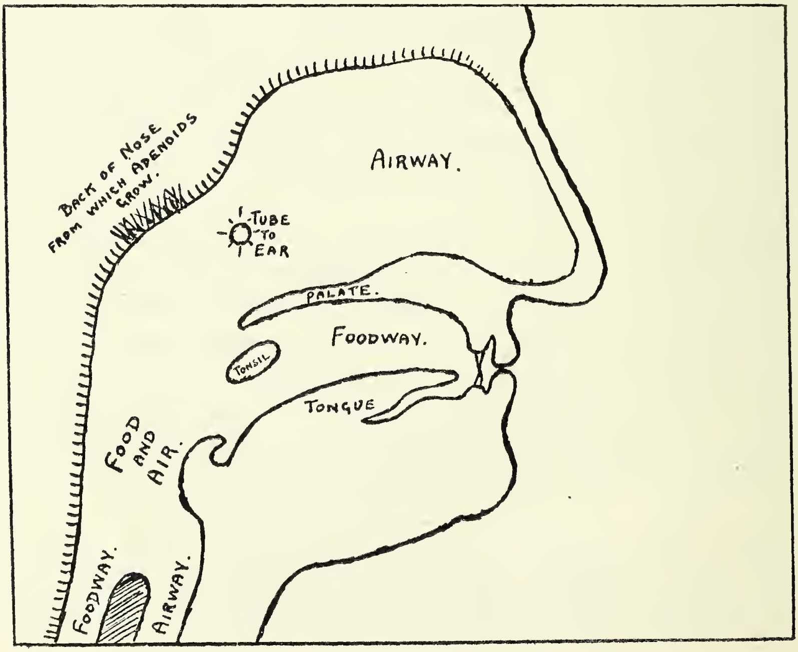
A child which cannot breathe easily cannot expand and exercise the chest properly; as a result the chest in its turn becomes weak and falls a prey more easily to bronchitis and other chest diseases.

Other diseases not yet mentioned which follow enlarged tonsils and adenoids are :—Anæmia, breathlessness, and even consumption and heart-disease. Further, children with adenoids are often listless and dull; they become normal and bright when the adenoids have been removed.

If you suspect that your child is suffering from enlarged tonsils or adenoids consult your own doctor or the school doctor at once. He will be pleased to advise you what to do.

An operation is often the only cure for these ailments and you would be wise to face this rather than the certainty of some of the serious illnesses which have been mentioned.


BLOCKED AIRWAY.
ADENOIDS.
PALATE
FOODWAY.
SWOLLEN TONSIL.
TONGUE.
FOOD AND AIR.
FOODWAY.
AIRWAY.


BACK OF NOSE FROM WHICH ADENOIDS GROW.
AIRWAY.
TUBE TO EAR
PALATE.
FOODWAY.
TONSIL
TONGUE
FOOD AND AIR.
FOODWAY.
AIRWAY.

SKIN DISEASES. There is still a large incidence of skin disease.

Table 7.

CASES DISCOVERED AT ROUTINE OR SPECIAL EXAMINATIONS BY DOCTORS OR NURSES.

	1920	1921	1922	1923	1924
Ringworm of the Head	139	82	90	119	138
Ringworm of the Body	39	19	72	92	72
Scabies	301	59	19	17	10
Impetigo	455	420	384	408	690
Other Skin Diseases	158	99	56	135	144
	1092	679	621	771	1054

DEFECTIVE VISION AND SQUINT. Squint was discovered in 90 boys and 155 girls. These numbers are larger than those of last year. Twenty-seven of the cases (19 boys and 8 girls) were in children under five years of age. In 26 boys and 44 girls correcting glasses were being worn: 338 boys and 419 girls (being 15.6% and 18% of those examined) had in their worse eye vision of 6/12 or 6/24 only on Snellen's scale. Sixty boys and 45 girls had seriously defective vision (6/36 or worse in one or both eyes). Amongst so many cases of defective vision only 114 boys and 161 girls were, at the time of inspection, wearing suitable spectacles: 81.6% of the boys and 80% of the girls had normal vision, showing as is usual, that the boys have better vision than the girls. The vision of entrants is not examined.

The following leaflet has been written for the information of the parents of children with defective vision:—

DEFECTS OF VISION.

Suspect some eye defect when your child suffers from frequent headaches, when he says he cannot see the blackboard at school, or when he screws up his eyes when looking at things which are far off.

The chief defects of sight from which school-children suffer are:—

Long-sight,
Short-sight,
Astigmatism, and squint.

LONG-SIGHT.

There is difficulty in seeing objects close at hand so that the child finds it hard to read his school books unless they are held at an inconvenient distance from the face.

SHORT-SIGHT.

In this defect the sight is poor when the child looks at objects at a distance so that in bad cases he may not be able to recognise a person on the other side of the road : as he has never been able to see properly he is unaware that his vision is less than that of others.

SQUINT.

Squint is one of the most serious of all eye defects.

The squinting eye is turned out or in while the other eye does all the work. In consequence the squinting eye becomes weaker and weaker and in serious cases may become blind.

Squint may occur after an illness such as whooping cough or measles but is not caused by it. All cases of squint are dangerous and you should consult a qualified eye doctor as soon as the squint appears, no matter what the age of the child may be.

Squint in children above the age of two years never cures itself : children do not grow out of squint.

TO PREVENT DEFECTS OF VISION.

See that your child reads in a good light which should come over the left shoulder on to the book.

Don't let children under the age of 12 read much and never let them read very small print.

See that the child doesn't stoop over a book when reading : books should be held 18 inches from the eyes.

Attend to all inflammations of the eyelids at once.

Until the middle of 1924 the children were not referred for examination by the Ophthalmic Surgeon unless the vision was 6/18 or worse in at least one eye. Since then an increasing number with a visual defect of 6/12 only has been referred. The lighting of the test type in the schools is sometimes poor and it often happens that a child can read much smaller letters at the clinic, where the type is very well lighted, than at school.

DEFECTS OF THE TEETH. During 1924 the School Dentist examined the teeth of all the children born in 1918 and re-examined the children born in the years 1913-1917. The results of her inspections will be found on page 51. The Assistant School Medical Officers record only cases of gross decay and not the small foci discovered by the Dentist with the aid of probe and mirror: they reported three cases of marked oral sepsis (pyorrhœa) and 980 of serious dental caries.

DEFECTIVE HEARING AND EAR DISEASE. The hearing of all children above the age of 8 years subjected to routine inspection was tested by the "forced whisper" test. In 101 cases or 1.5% the hearing was found to be defective. In 1923, before this test was used as a routine, the number with defective hearing was reported to be only 27 or 0.4%. Many of these cases of slight defects are due to an accumulation of wax in the ears: after syringing of the ears the hearing is again normal and the child can take full advantage of the education provided.

Fifty-seven cases of otitis media (colloquially, "running ear") were found. This is a great increase on 1923 and is probably due to the greater attention now paid to this important defect which, if untreated, may lead to serious and often fatal complications.

TUBERCULOSIS. At the routine inspections 6 cases of definite and 9 of suspected tuberculosis of the lungs were found: also there were 14 cases of tuberculosis of the glands of the neck, 5 of abdominal tuberculosis, 2 of tuberculosis of the ankle, 1 of the knee, and 3 of the skin.

Fifty children were presented to the School Doctor either in school or at an inspection clinic because it was suspected that they were tuberculous. In 20, signs of tuberculosis were discovered: in 15 the disease was definite, and in 5 others the condition was so poor that there was strong evidence that the child was tuberculous and he was put on the list for further observation.

TUBERCULOSIS CONTACTS. A register is kept of school children who have lived in the same house as cases of notified pulmonary tuberculosis and these children, called "contacts," are examined by the School Doctor at least once a year. One hundred and fifty-nine contacts were reported upon in 1924 and in 3 the disease was found. All notified cases of tuberculosis are examined in school whenever the Doctor visits there. Thirty-eight were so examined during 1924.

Of the 46 definite cases of tuberculosis diagnosed at routine or special inspections, 22 had never been previously notified to the Medical Officer of Health and probably would have been undiscovered until the disease had become more serious had it not been for the school medical inspections.

HEART DISEASE. Sixteen girls and 7 boys were discovered at routine inspection to be suffering from valvular disease of the heart and 32 girls and 38 boys from functional disease. Thirty-six girls and forty-nine boys were reported to be anæmic, compared with 50 girls and 48 boys in 1923. An effort has been made, by lectures and otherwise, to spread the knowledge that rheumatism and "growing pains" in children are serious and are often the precursors of heart disease.

DEFORMITIES. Rickety deformities were noted at routine inspection in 212 boys and 179 girls, but in only 4 boys and 25 girls was the deformity serious. Fifteen boys and 107 girls were suffering from spinal curvature, and 20 boys and 14 girls had other deformities. These 34 cases included 19 of infantile paralysis, 3 of congenital dislocation of the hip, 8 wry neck, and 1 of crippling due to amputation of a leg.

DEFECTS OF SPEECH. At routine inspections 23 boys and 12 girls were noted to have defective speech. This is the usual proportion between the male and female sexes. During 1924, Miss Drummond unfortunately was able to take only one class for stammerers as her services were required elsewhere. This class was held at the Whalley Range Institute in November and December and treatment by Professor Berquand's method was given. The method, it is interesting to note, is based on the well-known fact that even the worst type of stammer disappears when the person is singing. To take advantage of this the children are taught to speak and read in a drawling singing voice, with a perceptible lengthening of each syllable of the word. Towards the end of the six weeks' course the speed of speaking is considerably quickened. A great deal of attention is, of course, paid to control of the breathing during speaking. Since stammering is a defect in which backsliding occurs very easily, the sympathetic co-operation of parents after the course is essential. Miss Drummond's report is as follows :—

"Sixteen courses of instruction for stammering children have been successfully held by the Blackburn Education Committee.

" Many of the cases were very difficult to treat owing to the children making facial contortions and great effort of lips, throat, and tongue when trying to speak. Some were 'dumb stammerers,' being inarticulate when commencing to speak or read. After a six weeks' course the stammerers could read, recite and converse with ease and without effort.

" This 'convalescent' period should be followed up by careful practice at home for a few months in order to ensure a thorough and permanent cure. Where there has been failure, it has been due to carelessness on the part of parent or child after leaving the class.

" It is very pleasing to hear from one of the Head Masters in the town that an old stammerer who received a course of instruction two years ago is the finest speaker in the school.

" A class of eleven boys has just completed a six weeks' course. In nine cases I have never heard them make a faulty sound since the commencement of the course. Upon examination by the Doctor at the end of the class all were certified to be able to read and speak with ease and without hesitation or effort."

ENLARGEMENT OF THE THYROID GLAND (GOITRE). During 1924, at the request of the Chief Medical Officer of the Board of Education, a note was made of enlargement of the thyroid gland found at the routine inspection of children born in 1911 or 1912. The gland was recorded as enlarged if it was visible on casual inspection and without measurement or palpation. There was a further subdivision into :—

(*a*) greatly enlarged,
(*b*) slightly enlarged,
(*c*) just visible.

The results are :—

	Boys.	Girls.
No. examined	837	890
Thyroid gland :		
(*a*) greatly enlarged	5	10
(*b*) slightly enlarged	4	31
(*c*) just visible	Nil	4
Total	9	45
Percentage of those examined	1.07	5.06

One of the Medical Inspectors (Dr. Ella Mackenzie) noted the same particulars in girls born in 1910 and subjected to routine inspection in 1924. There were 245 girls in this group and those with visible enlargement of the thyroid gland numbered 19 or 7·7%.

I am informed by G. W. F. Holroyd, Esq., M.A., F.I.C., that Blackburn water contains 10 parts of iodine per thousand million.

Other Defects. Six children were found to suffer from hernia (rupture). Five suffered from enuresis (bed wetting), 2 from hare lip, and 4 from undescended testicle.

INFECTIOUS DISEASES.

During the last quarter of the year measles, chicken pox and mumps were prevalent. The following Table shows the total number of cases of the principal infectious diseases which were notified or reported in the Borough and the number of those which occurred amongst school children.

	Total number known in the whole Borough.					Number occurring amongst School-children.				
	1920	1921	1922	1923	1924	1920	1921	1922	1923	1924
Diphtheria	69	45	52	35	61	43	21	21	17	36
Scarlet Fever	182	211	232	216	69	128	153	147	147	54
Enteric Fever	5	2	5	3	2	—	—	—	1	—
Measles	1446	57	1688	427	927	1435	54	1547	373	820
Whooping Cough ...	17	369	171	318	172	14	351	165	289	141
Chicken Pox	244	247	264	237	476	239	243	261	225	424
Mumps	57	75	156	175	342	57	75	156	174	326

The low incidence of scarlet fever is especially remarkable. Only one school closure was recommended, namely, that of the Witton Infants' Department, which was closed, because of the excessive prevalence of whooping cough, from the 30th January to the 18th February. Information of infectious disease in the schools is much more complete since the coming into operation of the Blackburn Corporation Act, 1922, Section 76 of which requires the parents of any child attending a Day or Sunday School to notify the Head Teacher at once should any infectious disease occur in any member of the family.

For many years certain School Medical Officers, myself included, have studied the relationship between school attendance and the spread of infectious diseases. This subject is dealt with at some length in my Annual Report for 1922. It has been the custom to recommend the closure of a Department when cases of infection reach more than a percentage varying from 10 to 20, depending upon the locality of the school and the number of scholars still in attendance who had not been immunised against the disease by a previous attack. When a school is closed the main source of information of the cases fails, as the teacher no longer sends his daily list of absentees and of children sent home because he suspected they were commencing with the disease. As the diseases most concerned, measles, whooping cough, mumps and chicken pox, are not compulsorily notifiable, nothing is known, until the school re-opens, of cases which occur during the time the school is closed, and in consequence a belief, probably unfounded in the efficacy of school closure has arisen. In 1922, in Blackburn 211 children developed measles whilst the schools which they ordinarily attended were closed on account of the epidemic : this information was obtained after the schools re-opened. Thirty-five children developed measles in the first week after re-opening, 19 in the second, and 4 in the third. It is probably true that in a town, children come into almost as close contact at play in the streets or in each other's houses when the school is closed as they do when the school remains open. This, however, is certain : that as the cases are not brought to the knowledge of the Health Department during the school closure, advice and help cannot be given by the officers of that Department to the family concerned at a time when it is most needed, namely, immediately after the onset of the disease. Further, even if the attendance is only 50%, the children who are well should not be deprived of the advantages of school attendance unless it is absolutely certain that the school is acting as a focus of infection. It was, no doubt, in view of such considerations as these that the Board of Education issued in September last a Circular in which they stated, " There is a consensus of medical opinion that as a general rule the best method of preventing the spread of infection during an epidemic is the careful exclusion of individual children and not the closure of whole schools or departments." " In future, therefore, the Board will not regard the prevalence of an epidemic of disease as a reasonable ground for the closure of a school by the voluntary action of the Local Education Authority save in exceptional circumstances when the School Medical Officer advises or approves such closure on purely medical grounds." It is provided, however, that " when the attendance of a school or department has fallen below 60% of the number of children on the registers and the Local Education Authority are satisfied by a certificate from the

School Medical Officer that the fall in attendance to so low a percentage may reasonably be attributed to the prevalence of epidemic illness in the district, the meetings and attendances for the period during which the percentage fell below 60% need not be reckoned in calculating the average attendances for the purpose of the Board's grant." As the results of school closure in towns have, in my experience, never shown conclusively that an epidemic could be stopped by school closure, a trial is being made of the method suggested by the Board, namely, keeping the schools open, excluding at once any child who shows the slightest suspicion of the onset of the infection and visiting the houses of those infected or suspected to be infected. Our experience of the latter method is too small to allow us to discuss in detail the relative values of the two methods but it may be said, so far as measles is concerned, that it usually occurs in epidemic form every two years. The cases reported in school children in 1924 when the schools were kept open numbered 820 compared with 1,547 in 1922 and 1,435 in 1920. It cannot, therefore, be said that keeping the schools open this year has caused an increase of the cases and it is not improbable that the correct conclusion will be that the number of cases in Blackburn in an epidemic year will be similar whether the schools are open or closed.

The cases of mumps and chicken pox were more numerous than in recent years but these diseases do not show the same periodicity as does measles, and the increase is probably due to factors unconnected with the opening or closing of schools. The number of schools in which the attendance fell below 60% was 18. Twenty-seven certificates to the effect that low attendance was caused by the prevalence of infectious disease were issued. The total number of weeks to which the certificates related was 61.

Vaccination. The entrants were unvaccinated to the number of 55% of the boys and 54% of the girls, this being a slight improvement on last year's figures: 40% of the leaving boys and 49% of the leaving girls were unvaccinated.

FOLLOWING-UP.

Work of the School Nurses. During the year the School Nurses paid 2,579 home visits: 2,093 to urge medical treatment and 486 to give advice about uncleanliness. The School Nurses assisted the Medical Inspectors in school for 309 sessions and at the inspection clinic for 111, the Dentist in school for 100 sessions and at the dental clinic for 196. They assisted the Ophthalmic Surgeon on 74 occasions and treated children at the Minor Ailments Clinics for 690 sessions. The Authority provides treatment for defects for which, otherwise, the provision is inadequate : a list of the clinics and where and when held is given on page 6.

The following Table shows how the work at the clinics has increased during the past five years :—

CLINIC ATTENDANCES.

Year.	Minor Ailments Clinics.	Ophthalmic Clinic.	Inspection Clinic.	Dental Clinic.	Nose and Throat Clinic.	Remedial Exercises Clinic.	Total.
1920	1012	407	3433	...	...	...	4852
1921	8527	1289	2995	1658	159	356	14984
1922	10801	959	1806	2801	99	679	17145
1923	11264	666	1465	3886	251	773	18305
1924	17143	1052	1407	3593	362	1699	25256

CHARGES FOR TREATMENT. The scheme of charging for medical treatment described in last year's Annual Report was in operation throughout 1924. The amounts taken in the various departments were :—

	£	s.	d.
Minor Ailments	1	4	10
Dental Clinic	14	1	0
Operative Treatment of Adenoids and Enlarged Tonsils	18	11	3
Conveyance home in Ambulance after Operation	3	15	3

The total cost of the throat operations was £367 5s. 6d., and for the ambulance £5 3s. 6d.

Spectacles were supplied to the number of 154. They cost £58 15s. 9d. The amount recovered from the parents was £42 0s. 6d.

The sums recovered are small and that perhaps is the reason why there is no evidence that the charging of the fees is being used as an excuse to neglect to obtain treatment.

MINOR AILMENTS. The following Table gives particulars of the cases of minor ailments dealt with during the year :—

TABLE IV.

GROUP I.—MINOR AILMENTS (excluding uncleanliness, for which see Group V., page 43).

Disease or Defect.	No. of Defects treated or under treatment during the year.		
	Under the Authority's Scheme	Otherwise	Total
SKIN—			
Ringworm—Head	139	17	156
Ringworm—Body	83	3	86
Scabies	6	...	6
Impetigo	687	25	712
Other Skin Diseases	113	22	135
MINOR EYE DEFECTS— (External and other, but Excluding cases falling in Group II.)	185	1	186
Minor Ear Defects	229	8	237
MISCELLANEOUS (*e.g.*, Minor Injuries, Bruises, Sores, Chilblains, etc.)	272	11	283
Totals for 1924	1714	87	1801
Totals for 1923	1065	132	1197
Totals for 1922	1007	285	1292
Totals for 1921	682	842	1524

The above Table shows that the number of children requiring treatment for minor ailments has increased considerably. The clinics are now very popular and practically all the children with minor ailments whose parents cannot afford private treatment attend. Those under the heading "treated otherwise" are mostly children who receive ointment or other domestic treatment: the number who attend a private doctor is very small.

The following Tables show that 1,316 cases were dealt with during the year at the Victoria Street Treatment Clinic (until May, the Town Hall Clinic) and 488 at Bolton Road :—

Table 8.

VICTORIA STREET TREATMENT CLINIC.

Disease.	Brought Forward from previous year	No. of New Cases	No. of Attend-ances	Number excluded from School	Average Number of Attend-ances before fit for School	Still attend-ing at end of Year
Ringworm — Head	10	108	1638	83	14·3	9
Ringworm — Body	10	49	652	55	8·9	9
Impetigo	14	465	3975	119	10·0	11
Blepharitis	2	60	1004	7	6·2	7
Other Eye Disea's	5	31	278	7	9·7	2
Conjunctivitis	4	36	1258	14	15·4	4
Ear Discharge	4	85	887	3	15·0	4
Wax in Ears	1	63	484	...	...	1
Other Ear Disea's	5	24	198	2	14·0	...
Seborrhœa	...	4	39	1	13·0	...
Scabies	...	4	9	3	4·0	...
Sores — Head (Vermin)	2	81	467	53	4·4	7
Sores — Body (Vermin)	...	1	1	1	1·0	...
Minor Injury	2	114	906	9	10·1	3
Miscellaneous	3	129	977	21	5·2	5
Total 1924...	62	1254	12773	378	...	62
Total 1923..	29	819	8568	355	...	62
Total 1922...	44	721	6813	303	...	29

Table 9.

BOLTON ROAD TREATMENT CLINIC.

Disease.	Brought Forward from previous year	No. of New Cases	No. of Attendances	Number excluded from School	Average Number of Attendances before fit for School	Still attending at end of Year
Ringworm — Head	4	17	506	16	24·8	1
Ringworm — Body	2	22	283	19	13·3	2
Impetigo	4	204	1763	64	10·7	8
Blepharitis	...	30	199	2	2·5	1
Other Eye Diseases	...	12	122	1	9·0	...
Conjunctivitis	...	5	51	3	11·0	...
Ear Discharge ...	3	17	108	...	...	...
Wax in Ears	...	26	215	...	..	...
Other Ear Diseases	...	1	9	...	...	...
Seborrhœa	1	3	120	...	...	...
Scabies................	...	...	...	...	...	...
Sores — Head (Vermin)	...	18	110	10	3·5	2
Sores—Body (Vermin)	...	...	...	...	...	..
Minor Injury	...	45	365	1	3·0	3
Miscellaneous	...	74	519	8	14·3	3
Total 1924	14	474	4370	124	...	20
Total 1923 ...	6	276	2696	94	...	14
Total 1922	20	222	1848	83	..	6

The average daily attendance at the Victoria Street Clinic was 42, and at 119 Bolton Road, 15. The corresponding figures for 1923 were 29 and 9.

CLEANSING STATION. Fourteen school-children were dealt with at the Throstle Street Station : 6 because they suffered from scabies (the itch) and 8 because they were very verminous. In these serious cases the other members of the family are given an opportunity of attending with the school-children, and while the cleansing is in process the bedding and house are disinfected. The response of the adults was not very good : 5 adults altogether were cleansed during the year. The total number of cleansings was 42 : these include 5 adults and 2 children under school age.

The following Table gives the particulars required by the Board of Education :—

TABLE IV.

GROUP V.—UNCLEANLINESS AND VERMINOUS CONDITIONS.

		1924	1923
i.	Average number of visits per school made during the year by the School Nurses ...	3	4
ii.	Total number of examinations of children in the Schools by School Nurses	25076	25014
iii.	Number of individual children found unclean	3432	3798
iv.	Number of children cleansed under arrangements made by the Local Education Authority	†467	*271
v.	Number of cases in which legal proceedings were taken :—		
	(*a*) Under the Education Act, 1921	none	none
	(*b*) Under School Attendance Byelaws ..	none	none

†Clinic	102	*Clinic	76
†Loan of Comb	348	*Loan of Comb	174
†Cleansing Station ..	17	*Cleansing Station ..	21

The National Society for the Prevention of Cruelty to Children were asked to deal with the worst cases (see page 73).

LOSS OF SCHOOL ATTENDANCES.

THROUGH EXCLUSION OF CHILDREN SUFFERING FROM MINOR AILMENTS.

The following Table shows, for the year 1924, the number of school children suffering from Minor Ailments requiring exclusion from school and the number of days (including Sundays, Saturdays, and School Holidays) those children were excluded during the year :—

Table 10.

Disease.	No. of excluded cases brought forward from previous year	Total No. of New Cases excluded during the year	No. of days excluded	No. of Cases on books at end of year
Ringworm—Head	18	100	3336	8
Ringworm—Body	12	67	1282	8
Scabies	...	6	203	...
Impetigo	19	180	3738	9
Verminous Conditions ..	2	114	1775	5
Ear Diseases	2	5	145	..
Eye Diseases	4	31	715	2
Other Skin Diseases	3	13	296	1
Miscellaneous	...	28	473	...
Total, 1924...	60	544	11963	33
Total, 1923...	19	546	11896	60
Total, 1922...	49	641	12135	19
Total, 1921...	76	1009	21883	49

The figures relating to the various diseases are similar to those for 1923: the number of days lost by reason of these ailments has been reduced from 21,883 in 1921 to approximately 12,000 in each of the past 3 years. The average period of exclusion for each disease, of children re-admitted to school during the past four years, is shown below:—

Average Period of Exclusion in Days.

	1924	1923	1922	1921
Ringworm, Head	28.2	27.9	29.8	44.8
Ringworm, Body	16.1	22.1	18.6	22.7
Scabies	33.8	16.5	25.2	40.1
Impetigo	18.7	22.3	16.4	22.8
Other Skin Diseases	18.5	16.2	21.6	24.0
Verminous Conditions	15.3	11.4	12.8	12.5
Eye Diseases	20.4	48.0	29.6	28.5
Ear Diseases	20.7	12.1	23.4	28.5
Miscellaneous	16.8	13.6	28.2	16.0

The most striking feature of this Table is the reduction in the average period of exclusion of cases of ringworm of the scalp from 44.8 to under 30 days. The iodine-calomel treatment used since 1922 has been responsible for this result.

VISUAL DEFECTS. During the year 649 children with defective vision were referred for treatment and there were 172 cases outstanding from 1923: 523 of the new cases attended the Authority's Ophthalmic Clinic; in addition 169 children returned to the clinic to ascertain whether or not their spectacles should be changed.

The next Table gives the particulars required by the Board of Education:—

TABLE IV.

GROUP II.—DEFECTIVE VISION AND SQUINT.

Disease or Defect.	Number of Defects dealt with.			
	Under the Authority's Scheme.	Submitted to refraction by private practitioner or at Hospital apart from the Authority's Scheme.	Otherwise.	Total.
Errors of refraction (including squint.)	*692	8	5	705
Other defect or disease of the Eyes (excluding those recorded in Group 1).	32	...	...	32
Total	724	8	5	737

* Including cases re-examined to see whether Glasses should be changed.

Eleven cases of eye disease also suffered from errors of refraction and are included in both lines of the Table.

Total number of Children for whom Spectacles were prescribed:

(*a*) Under Authority's Scheme	*566
(*b*) Otherwise	13

* Includes 122 prescriptions given on re-examination.

Total number of Children who obtained or received Spectacles:

(*a*) Under Authority's Scheme	454
(*b*) Otherwise	13

The following is the Statistical Report on the 523 new cases seen at the Ophthalmic Clinic during 1924: the clinic was open for 72 sessions compared with 63 in 1923:—

Table 11.

OPHTHALMIC CLINIC.

	Discharged after appropriate treatment.	
EYE DISEASES:		
Blepharitis	1	
Phlyctenular Conjunctivitis	2	
Nebluæ (Corneal)	16	
Cataract (Congenital)	5	
Other Eye Diseases	8	
	—	32
EXAMINED FOR REFRACTIVE ERRORS:		
Emmetropia (Normal Vision)	13	
Simple Hypermetropia	68	
Hypermetropic Astigmatism	166	
Mixed Astigmatism	91	
Myopia	91	
Myopic Astigmatism	65	
	—	494
Total		526

Cases of refractive error who received Homatropin but did not return for glasses to be prescribed	8

Eleven cases of eye disease also suffered from errors of refraction and are included in both sections of the Table.

Fifty-five of the above-mentioned children suffered from convergent squint and one from divergent squint.

Seriously Defective Vision. In 31 of the children for whom glasses were prescribed at the clinic, the error of refraction was over five dioptres, a very serious amount.

The number of children awaiting examination for glasses at the end of 1924 was 202 : this is apart from 83 children with defective vision who left school during 1924 without having obtained a prescription. The number of outstanding cases at the end of 1923 was 172 : at the end of 1922, 74; at the end of 1921, 247 : and at the end of 1920, 286. The 202 cases awaiting examination at end of 1924 include 100 children for whom an appointment was made at the Clinic but who did not attend and 8 who attended once but never returned. The number of cases outstanding at the end of 1924 is larger than in recent years because during November and December a number of children with vision of 6/12 only were re-examined and as the visual defect persisted they were referred to the clinic. During the year 566 prescriptions were issued at the Ophthalmic Clinic : 444 for children who had never worn spectacles before and 122 for children whose lenses had to be replaced.

The number who actually obtained spectacles during the year was 454. This does not include 59 children who obtained glasses in 1924 but whose prescriptions were obtained in 1923. One hundred and twelve of the 1924 cases had not obtained glasses at the end of the year. Thirty-six did so, however, during January, 1925. The 112 include 14 who left school on attaining the age of 14 years and also three of the re-examination cases. As only 298 pairs of spectacles were obtained in 1923, the 1924 result is more satisfactory, but when it is remembered that it costs public funds approximately 10/- for every child supplied with a prescription it is serious that so many as 112 made no use of the prescription this year. In 47 obdurate cases of refusal to buy spectacles the Inspector of the National Society for the Prevention of Cruelty to Children was requested to call. After persuasion, warning and numerous visits he succeeded in obtaining glasses for all.

Apart from the difficulty in persuading parents to buy spectacles, there is a further difficulty in ensuring that the children wear them. Dr. Mackenzie inquired into this matter during the year. In the departments which she visited there were 296 children for whom spectacles had been provided. Although the observations were made at the time of routine medical inspection, of which notice had been given, only 221 or 75% of the children were wearing spectacles. In 23 the glasses had been broken and in 52 they had been "left at home." It is the teachers and they alone who can insist on the pupils wearing the glasses, at least in school, and I would appeal again to them to require all children who ought to wear glasses to do so.

CHRONIC INFLAMMATION OF THE EYE. During the year 13 cases of phlyctenular conjunctivitis, selected by the Ophthalmic Surgeon, have been treated by injections of detoxicated tubercle vaccine. During the previous two years tuberculin (B.E.) had been used for this purpose, and it was decided this year to give the newer preparation a trial. It is of course difficult to determine, on the results of the few cases treated, whether or not detoxicated vaccine is superior to tuberculin for the treatment of this condition, but it is to be noted that no severe reaction occurred even with large doses and most of the cases cleared up in a satisfactory manner after a comparatively few injections. The attendance of the children to receive their weekly injection was good and no objections were raised by parents except in one case where the mother refused this kind of treatment owing, apparently, to a disbelief in injections. The general physical condition of one boy was poor for several months and as his conjunctivitis was not clearing up in a satisfactory manner he was recommended for admission to the Corporation Hospital Residential Open Air Class and after a few months' treatment there the eyes were quite cured.

Taking all the cases the average number of injections was 6, but this includes 4 children who commenced treatment late in the year. The disease has been quiescent for three months or longer in 6 cases, and 6 children are still under treatment. On the whole the number of difficult or refractory cases has been less during 1924 than in the preceding two years. It is to be noted that a necessary adjunct to this method of treatment is the use of eye-drops and lotions at the Minor Ailments Clinics.

Cases Under Treatment, 1st Jan., 1924.	New Cases during 1924.	Cases Quiescent.	Discontinued. No Further Improvement likely.	Under Treatment, 1st Jan., 1925.
3	10	6	1	6

Adenoids and Enlarged Tonsils. At the beginning of 1924 the parents of 81 children who were awaiting operative treatment for adenoids and enlarged tonsils had requested the Authority to arrange for the operation. During 1924, 100 cases of enlarged tonsils, 26 of adenoids and 83 of enlarged tonsils and adenoids (total 209) were recommended for treatment. In 185 cases the Authority was requested to arrange for the operation. The parents were given the option of having the operation performed as in-patients at the Queen's Park Hospital, in accordance with the scheme described in my Annual Report for 1922, or as out-patients at the Royal Infirmary. Sixty of the 185 who desired treatment chose the Queen's Park Hospital and 125 the Royal Infirmary. There were 6 operating days at the Queen's Park Hospital and 13 at the Royal Infirmary. Eleven children failed to attend for examination prior to operation : two were found to have improved to such an extent that operation was not considered necessary and three were unfit to be operated upon, one on account of high temperature, and one because of a recent attack of influenza, while the third after admission to the Royal Infirmary became hysterical and was unmanageable : 142 children were operated upon at the Royal Infirmary. All were able to proceed home on the afternoon of the operation except one child who was detained for two days. Two other cases were sent back to the Infirmary : one was admitted on the night of the operation and was detained two days : the other was admitted two days after the operation and detained three days. The first child had suffered from hæmorrhage and the second from a minor degree of sepsis of the throat. Fifty-six of these 142 cases were conveyed home in the ambulance a few hours after the operation : the others were taken home in taxicabs obtained by their parents.

Fifty-one children were operated upon at the Queen's Park Hospital. All were discharged after two days in hospital. There was no complication in any of these cases.

Eleven children who were on the Royal Infirmary waiting-list obtained " out-patient " recommends " and were dealt with as ordinary patients : two others had the operation done by their own doctors.

At the end of the year 22 children were awaiting operation at the Royal Infirmary and 20 at the Queen's Park Hospital: these compare with 65 on the Royal Infirmary waiting-list and 16 on that for the Queen's Park Hospital at the end of 1923.

Appointments are made for the children to be re-examined fourteen days after the operation and to have a course of breathing exercises at the Remedial Exercises Clinic: 153 children out of the 193 operated upon presented themselves for the exercises, which are a very necessary completion of the cure.

The following Table shows that altogether 206 cases received operative treatment, and in 15 the condition was relieved by non-operative measures :—

TABLE IV.

GROUP III.—TREATMENT OF DEFECTS OF NOSE AND THROAT.

Number of Defects.				
Received Operative Treatment				
Under the Authority's Scheme, in Clinic or Hospital	By Private Practitioner or Hospital, apart from the Authority's Scheme	Total	Received other forms of treatment	Total Number treated
193	13	206	15	221

School Dental Department. With the exception of eight sessions devoted to dental work under the Tuberculosis and 12 under the Maternity and Child Welfare Scheme, the Dentist spent all her time examining and treating school children. The information required by the Board of Education is given in the following Table :—

TABLE IV. TREATMENT OF DENTAL DEFECTS.

GROUP IV.—DENTAL DEFECTS.

	Age			1924	1923	1922
(1) Number of children who were :—						
(a) Inspected by the Dentist :						
Routine Age Groups	5	—	Total..	7988	7732	7111
	6	970				
	7	1024				
	8	1263				
	9	1505				
	10	1575				
	11	1651				
	12	—				
	13	—				
	14	—				
Specials				488	961	482
Grand Total				8476	8693	7593
(b) Found to require treatment				7562	6061	4308
(c) Actually treated				2613	3138	1891
(d) Re-treated during the year as the result of periodical examination				442	432	435
(2) Half-days devoted to Inspection				116	124	105
Half-days devoted to Treatment				291	291	311
Total				407	415	416
(3) Attendances made by children for treatment				3593	3886	2801
(4) Fillings : Permanent Teeth				1101	1072	1584
Temporary Teeth				21	48	17
Total				1122	1120	1601

	1924	1923	1922
(5) Extractions: Permanent Teeth	394	333	270
Temporary Teeth	3134	3406	2516
Total	3528	3739	2786
(6) Administrations of general anæsthetics for extractions	Nil	9	Nil
(7) Administrations of local anæsthetics for extractions	2561	2509	1579
(8) Other operations	460	261	167

Appointments to attend the Clinic for treatment were made to the number of 3,919, compared with 3,685 in 1923. Three thousand one hundred and five or 79% were kept, compared with 80% in 1923 and 70.9% in 1922. The number of mouths made healthy was 2,379, compared with 1,766 in 1923. The primary object of this scheme is to prevent serious dental caries by examining the mouths of children at the time of eruption of their permanent teeth and offering treatment to those requiring it. The Dentist re-examines each year all those subjected to routine examination in the preceding year and thus the scope of the work is ever widening. The limit of the dental work which can be done by one dentist has now been reached. The examination of the 5-year olds was omitted in 1924. The Dentist examined all children aged 6, 7, 8, 9, 10 and 11 years. Four hundred and fifty-eight "casual" cases were treated. These are children sent by school teachers or others because of toothache and include children whose parents had refused treatment when it had been offered after routine inspection.

An additional age group, the 12-year olds, containing some 1,600 children, should be examined in 1925. The present staff will be unable to cope with these additional numbers and a part-time dentist should be appointed to work for one or two sessions each week. This part-time assistant should be supplemented year by year until every child in the public elementary schools is examined by a dentist once a year and treatment provided for those for whom it is necessary.

Table 12.

STATISTICS RELATING TO INSPECTION BY THE DENTIST.

Number Examined.

Sex.	Year of Birth.	Number examined.	All teeth sound.	% all teeth sound.	More than five temporary teeth decayed.	% more than five temporary teeth decayed.	% no permanen teeth.	% with permanent teeth sound.	No. with carious permanent teeth.	% with carious permanent teeth.
B	1918	522	47	9·19	383	73·37	58·62	37·74	18	3·45
G.	1918	448	38	8·49	389	86·83	46·21	45·98	35	7·81
B.	1917	532	22	4·13	402	75.56	10.52	62·78	141	26·50
G.	1917	492	24	4·87	368	74·79	4·06	66·66	153	31·09
B.	1916	588	15	2·55	418	71·08	1·53	52·04	272	46·26
G.	1916	675	28	4·15	448	66·37	1·19	55·70	292	43·26
B	1915	711	15	2.10	434	61·04	—	43·74	400	56·26
G.	1915	794	22	2.78	431	54·28	—	43·82	546	68·76
B.	1914	759	37	4·74	327	43·09	—	38·99	462	60·87
G.	1914	810	44	5·39	280	34·31	—	35·78	525	64·34
B.	1913	819	56	6·83	217	26·50	—	46·64	540	65·91
G	1913	832	78	9·37	129	15·50	—	30·17	582	69·95
	Boys	3931	192	4·88	2181	55·62	9·43	46·50	1833	46·62
	Girls	4057	234	5·76	2045	50·40	5·79	44·09	2133	52·60
	Total 1924	7988	426	5·3	4226	52·9	7 6	45·3	3966	49·4
	Total 1923	7732	295	3·8	5283	68.3	29.2	28·2	3440	44·5

These figures give rise to the hope that the condition of the teeth of Blackburn children is, at least to a small extent, improving.

	1924.	1923.
Total number of Children inspected	7988	7732
No. with dental caries	7559 or 94.6%	7438 or 96.1%
,, advised to have dental treatment	5731 or 71.9%	5100 or 65.7%
,, not requiring immediate treatment	1855 or 23.2%	2338 or 31.4%
,, of parents present at inspection	65 or 0.8%	242 or 3.1%
,, of consents for treatment at clinic	2739 or 47.8%	2238 or 43.9%
,, who prefer private treatment	244 or 4.3%	310 or 6.1%
,, who refused treatment	1170 or 20.4%	1585 or 31.0%
,, of others, no definite decision	1578 or 27.5%	967 or 18.9%

The next Table gives further information with regard to dental treatment :—

Table 13.

DENTAL TREATMENT, 1924.

Number of Children.	Permanent Teeth			Temporary Teeth.		Anaesthetics.		Other Operations
		Filled.						
	Extracted.	Cement.	Amalgam.	Extracted.	Filled.	Local	G.	
Inspected cases ... 2125	185	958	1000	2991	21	2336	...	321
Casual cases 488	209	62	54	143	...	225	...	139

It is interesting to note that 417 children who were treated at the dental clinic in 1923 were, on re-inspection in 1924, found to have sound teeth, while 1,034 of those treated last year were found on re-examination to need further treatment: 1,709 referred for treatment in 1923 were found in the same or a worse condition in 1924, nothing having been done in the meantime. All these cases had either refused treatment by the Authority's Dentist or had not kept an appointment which had been made. Three hundred and thirty children examined in school in 1924 by the Dentist had been treated within the preceding twelve months by a private dentist.

Special features of this year's statistics are :—

1. The slight decrease in the number of children with dental caries.

2. The increase in the number advised to obtain treatment.

3. The negligible number of parents who attend the school when the Dentist examines their children's teeth.

4. The increase in the number who accept treatment at the clinic from 44% to 48%.

5. The decline in the number who definitely refused treatment at the clinic from 31% to 20%.

6. The large and unfortunate increase from 19% to 27% of those who do not trouble to answer the letter which points out that the child urgently requires dental treatment.

A leaflet on the importance of preserving the teeth has been distributed during the year, and this subject has been mentioned in various lectures on health topics which were given throughout the year.

REMEDIAL EXERCISES CLINIC. This clinic continued during 1924 under Miss Holmes, assisted by Miss Smalley. At the end of 1924 it was taken over by Miss Randall, the Orthopædic Nurse, and the sessions increased from two to four each week. During 1924 there were 78 sessions for breathing exercise cases and 217 children were treated. One hundred and fifty-three were cases after the operative removal of adenoids and enlarged tonsils. The operation cannot be regarded as a permanent cure unless the child is taught how to breathe properly through the nose. Seventy-eight sessions also were held for the treatment of deformities. The children are selected and the exercises prescribed by the Assistant School Medical Officer : he examines the children at not less than three-monthly intervals. An arrangement has now been made by which difficult cases can be seen by Dr. Briggs, who is acting as Orthopædic Surgeon. The following are details of the attendances :—

	1924	1923	1922	1921
Breathing Exercises	910	556	296	263
Deformities	789	217	428	93
Total	1699	773	724	356

Table 14.

REMEDIAL EXERCISES CLINIC.

DEFECT.	Under Treatment Jan. 1st 1924	New Cases Admitted during 1924	Total No. Treated	Discharged Cured	Left before Treatment concluded	Under Treatment Dec. 31st 1924	Attendances
Breathing Exercise Cases	19	198	217	90	114	13	910
DEFORMITIES :—							
Scoliosis	3	4	7	3	1	3	205
Kyphosis	3	31	34	15	14	5	468
Pigeon Chest & Kyphosis	1	0	1	0	1	0	8
General Treatment	...	2	2	0	2	0	23
Pigeon Chest	...	1	1	1	0	0	12
Infantile Paralysis	...	1	1	0	0	1	17
Scoliosis and Kyphosis	...	4	4	3	1	0	56
Total	26	241	267	112	133	22	1699

There are far too many children who cease attendance before they are cured. With the more effective following up which will be possible in 1925 this should be improved considerably.

PHYSICAL TRAINING. In compliance with a request by the Board of Education the following report by Miss Holmes, Organiser of Physical Training, is included here :—

" During the year 1924 the lessons in Physical Training were given entirely by the teachers attached to the various schools. No specialist teacher was engaged and in general the lessons were given in the playgrounds instead of in gymnasia as in former years. The only gymnasium used by elementary school children was the Harrison gymnasium and this only by children attending schools in close proximity to it.

" The training of the children has in no way suffered through the absence of a specialist staff. Head Teachers re-arranged time-tables so as to give for children up to 11 years of age, 5 lessons per week each of 20 minutes duration, and for older children 4 lessons each of 20 minutes duration and 1 longer period of 45 minutes for organised games. This shows that the aim of the Education Committee is to provide a daily period of physical exercises. In most schools the lessons were taken by each class teacher, but in some schools teachers specially qualified taught the subject throughout the school. The results were good: one pleasing feature of the recent Education Exhibition was the interest shown by the public attending, in the various items of physical exercises—dancing, drill or rhythmic exercises,—done by school children under the direction of their teachers.

" The arrangement of the Senior Time-tables which provide one long period of 45 minutes for organised games indicates the necessity of the provision of playing fields for children in attendance at Elementary schools. The Committee increased the number during the year 1924 and scholars in attendance at 24 departments had the opportunity of taking part in organised games under good conditions. The Committee provided footballs (distributed by the Blackburn Schoolboys' Football Association), and the materials necessary for hockey, captain ball, netball, croquet, and rounders.

" A successful class in Physical Training for Women Teachers was conducted by the Organiser during the winter session. Meetings of the Teachers' Games Club were held weekly and several matches were played."

BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.

Table III. gives particulars of the blind, the deaf, the crippled, the tuberculous, and the mentally defective :—

TABLE III.

Return of all Exceptional Children in the Area.

			Boys.	Girls.	Total.
Blind (including partially blind).	(i.) Suitable for training in a School or Class for the totally blind.	Attend'g Certif'd Schools or Classes for the Blind	4	2	6
		Attending Public Elementary Schools.	...	...	...
		At other Institutions.	...	...	...
		At no School or Institution.	...	...	...
	(ii.) Suitable for training in a School or Class for the partially blind.	Attend'g Certif'd Schools or Classes for the Blind.	2	...	2
		Attending Public Elementary Schools.	11	12	23
		At other Institutions.	...	...	...
		At no School or Institution.	...	...	...
Deaf (including deaf and dumb and partially deaf).	(i.) Suitable for training in a School or Class for the totally deaf or deaf and dumb.	Attend'g Certif'd Schools or Classes for the Deaf.	5	4	9
		Attending Public Elementary Schools.	1	...	1
		At other Institutions.	...	...	...
		At no School or Institution.	1	...	1
	(ii.) Suitable for training in a School or Class for the partially deaf.	Attend'g Certif'd Schools or Classes for the Deaf.	...	1	1
		Attending Public Elementary Schools.	1	...	1
		At other Institutions.	...	...	...
		At no School or Institution.	...	...	...
Mentally Defective.	Feebleminded. (Cases not notifiable to the Local Control Authority.)	Attend'g Certif'd Schools for Mentally Defective children.	37	19	56
		Attending Public Elementary Schools.	3	4	7
		At other Institutions.	3	...	3
		At no School or Institution.	3	3	6
	Notified to the Local Control Authority during the year.	Feebleminded.	2	...	2
		Imbeciles.	2	1	3
		Idiots.	1	...	1

TABLE III —Continued.

			Boys	Girls	Total
EPILEPTICS.	Suffering from severe epilepsy.	Attend'g Certif'd Special Schools for Epileptics.	1	...	1
		In Institutions other than Certif'd Spec'l Schools.	...	...	...
		Attending Public Elementary Schools.	...	...	...
		At no School or Institution.	2	3	5
	Suffering from epilepsy which is not severe.	Attending Public Ele. Schools.	2	...	2
		At no School or Institution.	...	...	...
PHYSICALLY DEFECTIVE.	Infectious pulmonary and glandular tuberculosis.	At Sanatoria or Sanatorium Schools aproved by the Ministry of Health or the Board.	...	...	...
		At other Institutions.	4	4	8
		At no School or Institution.	4	3	7
	Non-infectious but active pulm'nary and glandular tuberculosis.	At Sanatoria or Sanatorium Schools aproved by the Ministry of Health or the Board.	...	...	...
		At Certified Residential Open-air Schools.	8	3	11
		At Certified Day Open-air Schools.	11	15	26
		At Public Elementary Schools.	23	16	39
		At other Institutions.	4	...	4
		At no School or Institution.	3	2	5
	Delicate children (*e.g.*, pre- or latent tuberculosis, malnutrition, debility, anæmia, etc.	At Certified Residential Open-air Schools.	4	2	6
		At Certified Day Open-air Schools.	3	1	4
		At Public Elementary Schools.	37	39	76
		At other Institutions.	...	...	...
		At no School or Institution.	3	1	4
	Active non-pulmonary tuberculosis.	At Sanatoria or Hospital Schools approved by the Ministry of Health or the Board.	...	...	...
		At Public Elementary Schools.	1	1	2
		At other Institutions.	5	4	9
		At no School or Institution.	1	3	4
	Crippled children (other than those with active tuberculous disease), *e.g.*, children suffering from paralysis, etc. and including those with severe heart disease.	At Certified Hospital Schools.	...	...	...
		At Certified Residential Cripple Schools.	...	...	...
		At Certified Day Cripple Schools.	...	...	...
		At Public Elementary Schools.	64	56	120
		At other Institutions.	5	4	9
		At no School or Institution.	17	8	25

It will be noticed that the form in which particulars of exceptional children in the area are given differs in several respects from the last and preceding years' tables. The object of the Board of Education in making a change in the way such particulars are given is to obtain for statistical purposes a more precise classification of physical defects. Thus "blind" are differentiated into "totally blind" and "partially blind," and deaf into "totally deaf" and "partially deaf." A distinct forward step is the division of cases of pulmonary tuberculosis into "infectious" and "non-infectious": and that of non-pulmonary tuberculosis, by implication, into "active" and "quiescent." The last part of the table under the heading of "Physically Defective" contains a mixed collection of defects, *i.e.* quiescent non-pulmonary tuberculosis, paralysis mainly due to infantile paralysis, rickets, and severe heart disease. Some of these defects are of a fairly mild type but a large proportion are serious. In the absence of any school or institution in Blackburn for the education of crippled children a large number of such children are attending public elementary schools, and this is the best arrangement which, up to now, it has been possible to make. The need for a school for physically defective children is, however, a pressing one and this matter has been engaging the attention of the Education Committee and its sub-committees for some months.

Blind Children. The six totally blind children are being educated in residential schools—3 at the Homes for the Blind, Fulwood, Preston, and 3 at the Catholic Blind Asylum, Liverpool. The 25 children who are noted in Table III. as being partially blind are all attending public elementary schools except two. Most of these children are suffering from high myopia of such a degree that they cannot derive full benefit from the ordinary school curriculum. Special provision should be made for their education in a day class where precautions could be taken to prevent the visual defect from becoming worse. The arrangements made in 1923 for the training of children leaving schools for the blind at the age of 16 have been continued during the past year. The training is given at the Blackburn Workshops for the Blind, Thornber Street and Whalley Range, and suitable employments are taught such as basket-making, brush-making, knitting both on round and flat machines and cane-chair seating. At least once a year the Chairman of the School Attendance Reference and the School Medical Officer visit the blind children in the Special Schools and arrange for them to have vocational training, in occupations for which they have an aptitude, during the last two years of their education there. Two of the partially blind are being educated at Special Schools, one at Fulwood and the other at Liverpool. Their defect is of a very high degree and they can see very little.

DEAF CHILDREN. One partially and nine totally deaf children are being educated at the Royal Cross School for the Deaf, Preston. Two are awaiting vacancies, one of whom is, in the meantime, in attendance at an ordinary school. One of these is only four and the other five years of age. One partially deaf boy aged ten years is at an ordinary school.

MENTALLY DEFECTIVE CHILDREN. The number of these children in ordinary elementary schools has been reduced from 18 two years ago to 7. The reasons why they are not in the special schools are various : the principal one is that they reside too far from the school.

At the end of 1924 there were 37 boys and 19 girls in attendance at the Regent Street Special School. Six boys and 3 girls were admitted during the year and 4 boys and 4 girls discharged. One boy obtained work in a cotton mill : another is still seeking work on a farm. The other two discharged boys were brought before the Magistrates for pilfering, and sent, one to Wellesley Nautical School, Blyth, the other to the Fylde Colony. Two of the girls obtained work in cotton mills : one in Preston, the other in Blackburn. One girl is engaged in domestic work at the Queen's Park Cottage Home where she has lived for some years. Outside work will be found for her in due course. The other girl is in a Home in Burnley. She is under the supervision of the Central Lancashire Association for Mental Welfare. With one or two exceptions all the scholars made satisfactory progress during the year and the results in many cases were highly gratifying. The half-yearly reports showed good results in the mental subjects—reading, calculation and composition. The physical exercises, consisting of drill, games, and folk dancing, were taken regularly. The physique of the scholars has much improved ; the warm baths given weekly and the substantial meal daily have contributed towards this end. Excellent swimming results were obtained this year again. Every attention was paid to all defects of sight, hearing, speech, and teeth, and to skin diseases. Former pupils pay periodical visits to the school.

The following return required by the Board of Education has been prepared by Miss Clayton*, the Head Mistress of the School, who keeps in close touch with all her former pupils. It gives the present condition of the 167 children discharged from the school since 1910 :—

Table 15.

ANNUAL RETURN OF THE AFTER-CAREERS OF CHILDREN FORMERLY ATTENDING THE REGENT STREET SPECIAL SCHOOL.

	Boys.	Girls.
1. No. of Children who have left the School since 1910	114	53
2. No. who		
(*a*) have since died	10	2
(*b*) are known to be incapable by reason of mental defect of undertaking employment	4	3
(*c*) in attendance at an institution for further education	6	3
(*d*) are in other institutions	7	0
3. No. employed in		
(*a*) industrial or manual occupations ..	65	26
(*b*) agricultural or rural occupations..	3	0
(*c*) domestic occupations (including those who are helping in domestic work at home)	3	11
(*d*) commercial, professional or clerical work	2	0
(*e*)* "Blind Alley" or precarious occupations	5	0
4. No. who have left the neighbourhood or whose after-careers have not been traced	9	8

There are two feeble-minded Blackburn children in the Calderstones Institution of the Lancashire Asylums Board which is the Local Authority under the Mental Deficiency Act for the geographical county of Lancashire. One boy is at the Stoke Park Special Industrial School : the six feeble-minded children who were not at school suffer from a physical disability which so incapacitates them that they are unable to attend any day-school. Two feeble-minded children were notified to the Lancashire Asylums Board during the year and another four in January, 1925. They are the six children who left the Regent Street Special School during 1924. The two who left that school and were transferred direct to other institutions were not notified.

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* Miss Clayton's death in February, 1925, was a great loss to the town : her influence for good over her pupils was remarkable.

EPILEPTICS. In the Board of Education's new Table III. epileptic children are divided for the purposes of the return into those suffering from severe epilepsy and those suffering from epilepsy which is *not* severe. For practical purposes children who are subject to fits in school are regarded as severe cases and are excluded from ordinary schools. Six children suffering from epilepsy are known to the School Medical Officer. One was admitted to the Maghull Colony for Epileptics in January, 1924, and 5 are in no school or institution. Two boys with the less severe grade of the disease are attending open air classes. No case of severe epilepsy is attending an ordinary day-school.

PULMONARY AND GLANDULAR TUBERCULOSIS. The cases which have been definitely diagnosed and notified either by private practitioners, the Tuberculosis Officer or the Assistant School Medical Officers number 100. In 15, the disease is quiescent or non-infectious and the children are attending public elementary schools or the Day or Residential Open Air Classes. All these children are examined at regular intervals by the Assistant School Medical Officers : their "contacts" are also examined.

CRIPPLING DUE TO TUBERCULOSIS. The total number of tuberculous cripples is 39. In 24, the disease is quiescent and they are attending public elementary or open air schools. Nine children are inmates of Queen's Park Hospital and of the six other children whose disease is not yet regarded as arrested, two are attending public elementary schools and four are not at school.

The parts affected are :—

Hip	18
Knee	7
Spine	6
Arm	4
Ankle	3
Leg	1
Total	39

NON-TUBERCULOUS CRIPPLING. In the new Table III. severe heart disease is included as a cause of crippling and although, strictly speaking, this may be a logical classification, it is proposed in this paragraph to leave heart disease to the next section. Non-tuberculous cripples number 83, and their condition varies in severity from the more trifling defects, such as knock-knee or the lesser degrees of spinal curvature, to the complete crippling due to paralysis of one or more limbs. As regards the causation of these physical defects, anterior polio-myelitis, known commonly as infantile paralysis or colloquially as " tooth-stroke " takes the first place and generally the crippling thus caused is of a severe type. Undoubtedly the after-effects of this disease are preventable by appropriate medical treatment in the early stages, and at any time during childhood a great deal can be done by operative measures, massage or splints, to ameliorate any paralysis which may have occurred.

The next commonest cause of non-tuberculous crippling is rickets, which is a disease of early childhood and is due to a diet deficient in the vitamine contained in milk and animal fats and to a lack of sunlight and fresh air. Its usual manifestations are bow-legs and knock-knees. In the case of girls severe rickets is a most serious disease since deformities of the pelvis are its usual accompaniment and may give rise to serious trouble later in life during child-birth.

Several cases are due to congenital defects such as club-feet or dislocation of one or both hips : others to paralysis due to an injury to the brain at birth : and in four cases, to crippling caused by street accidents.

SUMMARY OF THE CAUSATION OF NON-TUBERCULOUS CRIPPLING.

Infantile Paralysis	39
Congenital Deformities	18
Rickets	14
Birth Paralysis	3
Accidents	4
Miscellaneous	5
Total	83

The arrangements made for the prevention and treatment of cases of crippling by the appointment of Dr. Briggs as Orthopædic Surgeon and by co-operation with the Board of Guardians and the Crippled Children's Aid Society have now been in full working order for the last two years. During 1924 there were 14 sessions at the Municipal Dispensary: 117 patients attended, of whom 57 were under five years of age: 40 from five to sixteen years and 20 over sixteen years. The importance of treating cripples as early as possible, and certainly before they reach the age of five years, needs no emphasis. The following shows the conditions from which the patients suffered:—

Table 16.

ORTHOPÆDIC CLINIC.

Infantile Paralysis		21	*Rickety Deformities:*		
			Bow Legs	33	
Tuberculous Conditions:			Knock-knee	12	
Spine	4		Others	7	
Knee	6				52
Hip	6		Congenital Dislocation		2
Skin	1		Club Feet		4
Foot	2		Results of Accidents		3
Ribs	2		Severe Flat Foot		1
Elbow	1		Curvature of the Spine		3
Hand	2		Other Deformities		2
		24	Nothing abnormal detected		5
					117

Several attended on more than one occasion and the total number of attendances was 192.

Twenty-nine X-Ray photographs were taken at the Corporation Hospital in connection with the work of this clinic. In 21 cases an operation was advised and in 23 splints were ordered. The procedure in cases where splints, special boots, or operations are advised is to forward the Doctor's recommendation to the Crippled Children's Aid Society, and that Society arranges for the splints, or boots, to be obtained, or, where operation is advised, for this to take place at the Queen's Park Hospital. The children can remain at this Hospital for as many months as the Doctor thinks necessary under ideal open-air conditions. On discharge the School Medical Officer is notified and the children are visited by a School Nurse who arranges for further attendance at the clinic. There is now close co-operation between the Orthopædic Clinic and the Remedial Exercises Clinic at the Town Hall, and the appointment of a specially-trained Orthopædic Nurse at the end of the year promises a further field of usefulness for the efforts of the Authority to ameliorate the lot of children suffering from physical deformities. At the end of the year there were 18 cripples of school age in the Queen's Park Hospjtal, 9 of whom were tuberculous. Arrangements have been made by the Guardians for the children to have lessons for a few hours each day while they are in hospital. There are, however, 29 cripples at home and, in the absence of a Special Day School, they are receiving no education whatsoever. Naturally the physical condition of these children is a heavy handicap and this is all the more to be deplored since many are mentally alert and would well repay any special education or training provided for them. They are easily taught and many excel at handwork. It is to be hoped that it will be possible for the Authority to make arrangements during the coming year for a school for such children so that they may become self-supporting members of the community.

HEART DISEASE. Cases of severe heart disease are included under the heading of "Crippled Children" to comply with the Board's requirements. Altogether there are 47 children in Blackburn known to the School Medical Officer, with cardiac defects which are so severe as to interfere materially with their ability to get about and to indulge in physical exercises like other children. Of these, 37 are attending public elementary or open-air schools, while the remaining 10 are not at school. The cause of heart disease in school children is nearly always rheumatic fever or less acute types of this disease which are termed "sub-acute rheumatism." The latter type is very frequently known as "growing-pains" in young children and it is unfortunate that parents tend to regard this condition as normal and in no way alarming. It cannot be too often emphasised that the natural processes of growth are always painless and that recurrent pains in any of the limbs are symptoms of a disease which may seriously weaken the heart. Other causes of heart disease in children are chorea, scarlet fever and recurrent tonsillitis. Accommodation for the education of children crippled by heart disease is urgently required in Blackburn.

Open-Air Schools. During 1924 the accommodation in the open-air schools was by no means sufficient for all the children who were available. The day open-air classes accommodate 130 children, the accommodation at the Corporation Hospital for day scholars having been increased by 10 during the year. The residential Class at the Corporation Hospital provides accommodaton for 20 scholars. It is fortunate that owing to the low incidence of scarlet fever during the year it was found possible to continue both the day and residential open-air classes at the Hospital. The Education Committee pay for the two teachers and the whole cost of the Education. They also pay for the dinners given to the day scholars, whose parents, however, contribute 4d. a day. The Health Committee pay for the maintenance of the residents and recover sums varying from 3/- to 7/- a week from the parents.

As regards the day open-air classes generally, children are admitted and discharged on the recommendation of the Assistant School Medical Officers. A large number of the admissions relate to diseases of the chest and to such tuberculous conditions as cervical and bronchial gland enlargements. Many children in the schools are living under unhygienic home conditions and the less robust types develop anæmia or debility or show signs of malnutrition. A few months' stay in a day open-air school generally leads to several pounds increase in weight and to a great improvement in the physical condition of the child. It is certain that these classes play an important part in preventing disease in after-life, and especially diseases of the chest, of which pulmonary tuberculosis is the most dangerous.

There is still lack of accommodation in certain areas, particularly in the Mill Hill district : the nearest open-air school, at the Corporation Hospital, being 1½ to 2 miles away.

At the end of the year the open-air day classes contained upon their rolls 136 children. The conditions for which they were admitted are :—

Pulmonary Tuberculosis (Quiescent)	8
Other Tuberculous Conditions (Glands, etc.)	30
Bronchitis and/or Asthma	17
Anæmia and Debility	28
Heart Disease	10
Chorea	8
Malnutrition	12
Infantile Paralysis	1
Epilepsy	2
Miscellaneous	20
Total	136

The following Table gives information concerning admissions to and discharges from the classes :—

Table 17.

On Register 31st Dec., 1923	Admitted during 1924	Discharged during 1924	On Register 31st Dec., 1924	Average duration of Attendances of those Discharged	Average Increase in Weight of those Discharged
Accrington Road Open Air Class.					
27	25	25	27	14.4 months	7.3 lbs.
Bangor Street Open Air Class.					
26	24	24	26	10 months	8 lbs.
Corporation Park Open Air Classes (2).					
50	30	30	50	17.5 months	9.1 lbs.
Corporation Hospital Non-Residential Open Air Class.					
13	42	22	33	6.8 months	5.6 lbs.
115	121	101	136		

Residential Open-Air School, Corporation Hospital.

The circumstances under which this school was opened, its object and curriculum were described fully in last year's report. The school was open throughout the year 1924.

The following Tables have been prepared by Dr. Lamont :—

	On Register 1st Jan. 1924	Admitted during 1924	No. discharged	On Register 31st Dec., 1924	Average duration of attendance of those discharged	Average increase of weight of those discharged
Residents	20	36	35	21	25·2 wks	10 lbs. 3 ozs.
Day Scholars	13	42	22	33	27·1 ,,	5 ,, 10 ,,
Total	33	78	57	54	25·2 ,,	7 , 14½ ,,

Conditions for which the residents were admitted :—

Pulmonary Tuberculosis	6
Other Tuberculous cases, including tuberculous glands in neck, chest, and abdomen	18
Bronchitis and Asthma	7
Pneumonia Convalescents	2
Malnutrition	1
General Debility and Anæmia	2
Total	36

The following Tables show the average gains in weight, height, chest measurements, and vital capacities of (1) all the scholars, (2) those who were in attendance for over six months, and (3) those who were in attendance for periods under six months.

(1) ALL CHILDREN.

	Average gain in weight of those under treatment	Average gain in height of those under treatment	Average increase in chest measurement of those under treatment	Average increase in vital capacity of those under treatment	Average period of treatment
				litres	
Residents...	9 lbs. 8 ozs.	1·38 ins	1·4 ins.	0·236	31·8 weeks
Day Scholars	5 ,, 3 ,,	1·07 ,,	1·13 ,,	0·136	30·6 ,,

(2) CHILDREN UNDER TREATMENT FOR OVER SIX MONTHS.

	Average gain in weight	Average gain in height	Average gain in chest measurement	Average increase in vital capacity	Average period of treatment
				litres	
Residents......	11 lbs. 1 ozs.	1·87 ins.	1·5 ins.	0·244	38 weeks
Day Scholars...	7 ,, 2 ,,	1·3 ,	1·25 ,,	0·140	38 ,,

(3) CHILDREN UNDER TREATMENT FOR LESS THAN SIX MONTHS.

	Average gain in weight	Average gain in height	Average gain in chest measurement	Average increase in vital capacity	Average period of treatment
				litres	
Residents	8 lbs. 5½ ozs.	0·8 ins.	1·04 ins.	0·123	14 weeks
Day Scholars ...	3 ,, 4 ,,	0·9 ,	0·9 ,,	0·127	15 ,,

The hæmoglobin content of the blood of each of the scholars was examined on admission and just before discharge. Many showed on admission a deficiency of hæmoglobin to an extent of nearly 20%. In 88% of the resident scholars the hæmoglobin content of the blood increased by over 13% during their stay in the school and in 80% of the day scholars by over 10%.

The previous medical history of the children is as under :—

TABLE GIVING THE PERCENTAGES OF THE CHILDREN IN THE HOSPITAL OPEN-AIR SCHOOL WHO HAVE PREVIOUSLY SUFFERED FROM THE FOLLOWING DISEASES.

	Whooping Cough	Pneumonia.	Swollen Glands.	Bronchchitis.	Measles	Scarlet Fever.	Influenza.
Residents	44%	22%	28%	48%	69%	16%	34%
Day Scholars ...	39%	17%	17%	34%	70%	21%	27%

The next Table shows that the great majority of the children showed by the tuberculin reaction (Von Pirquet or Moro) that they were infected with tuberculosis. It also shows the percentages with enlarged glands.

	Enlarged cervical glands.	Enlarged bronchial and mediastinal glands.	Positive Von Pirquet re-action.	Positive reaction to Moro's diagnostic test.	Reaction to one or other of the tuberculin tests.
Residents ...	48	43	84	80	93
Day Scholars	39	16	78	73	83

	% showing definite tuberculosis in one parent	% showing definite tuberculosis in brother, sister, or other relative	% showing definite tuberculosis in any member of the family
Resident	25	6	41
Day Scholars......	10	5	20

The following points are of special interest :—

1. The children who were resident in the Hospital Open-Air School showed a much greater improvement in weight, height, and chest measurement than those who attended as day scholars. In the case of the day scholars no doubt the home conditions, and especially the sleeping accommodation in the homes, helped to undo to some extent the benefit derived from the open-air which they enjoyed during the day.

2. The children, both resident and day scholars, showed a considerable improvement in nutrition. This improvement was especially marked in the resident scholars.

3. There were six children suffering from definite tuberculosis of the lungs, but none of these children was a "sputum-positive" case, *i.e.*, none of them showed the presence of the bacillus of tuberculosis in the expectoration.

The following report shows the present condition (January, 1925) of the children discharged from the residential school during 1923 :—

"Of the 22 children who were discharged from the Residential Open-Air School during 1923, 15 have continued to show improvement or have remained in good health; six have remained 'in statu quo'; and in only one has there been a definite retrogression and evidence of further tuberculous disease. Eleven of these children continue in sufficiently good physical condition to allow regular attendance at ordinary day schools, and five attend day open-air schools. Seven of the 22 children are now over school age. Four of these are working regularly, while three are not in regular employment. Although the number of children who have been kept under observation after discharge from the Residential Open-Air Class for more than a year is small, there is sufficient evidence to show that the great majority of these children have derived permanent benefit."

PROVISION OF MEALS.

There was no alteration during 1924 in either the dietary or the administrative arrangements. The total number of necessitous cases requiring to be fed during the year was only 104, and most of these were only on the books for a portion of the year. This number compares with 63 in 1923, 51 in 1922, 392 in 1921, and 52 in 1920. The number of meals supplied to the necessitous was 5,252. The number of meals supplied for payment at the special and central schools was 175,878, the number of recipients being 968.

CO-OPERATION OF TEACHERS.

It is a pleasure to record again the hearty co-operation of the teachers in our work. The officers of the School Medical Service endeavour to cause as little inconvenience as possible to the ordinary work of the school, and trust that their endeavours to improve the physique of the children are assisting materially the educational work by rendering the children more receptive of the teaching provided.

INSPECTION CLINICS.

There have been 81 inspection clinics. The average attendance at this clinic during the year was 17, compared with 14 in 1923. The number of children who attended was 1,054, compared with 1,004 in 1923. The total attendances were 1,407, compared with 1,465. The children were referred to the clinic by:—

	1924	1923	1922
School Attendance Officers	257	311	388
School Nurses	533	451	287
Teachers	171	216	391
Medical Inspector for further examination	17	15	35
Parents	76	11	4
Total	1054	1004	1105

Inspection clinics were held on Tuesday afternoons and Saturday mornings.

CO-OPERATION WITH VOLUNTARY BODIES.

During 1924 the After-Care Sub-Committee of the Juvenile Employment Committee followed up at home 69 children who had left school with untreated physical defects. The following report upon them has been received from Mr. Lister, the Juvenile Employment Officer:—

Received medical attention since leaving school	22
Promised attention	13
Parents say defects improved and no attention required ...	12
Children with glasses, but not wearing them	7
No attention received: further after-care required	15

Co-operation with the Crippled Children's Aid Society and the National Society for the Prevention of Cruelty to Children is maintained. The two Societies work in conjunction with regard to the scheme, previously described, for obtaining hospital treatment for cripples.

Forty-seven cases of refusal to obtain spectacles, 13 of general neglect accompanied by a verminous condition, three of refusal to have carious teeth and enlarged tonsils treated, and one of refusal to obtain treatment for chronic eczema were notified to the National Society's Inspector. All were visited by him, and the parents warned. In only one case was a prosecution necessary. In this there was serious neglect, and the parents were fined £5.

EMPLOYMENT OF CHILDREN AND YOUNG PERSONS.

This work is carried out in close co-operation with the Juvenile Employment Officer. During 1924 the juvenile employment cards of 1,284 children were completed by the Medical Inspector at the examinations held a few months before they left school. This compares with 1,216 in 1923 and 714 in 1922.

The classification used is as under :—

1. Fit for any employment.
2. Defective vision, including diseases of the eye-ball.
3. Defective hearing, including middle ear disease.
4. Recurrent naso-pharangeal catarrh.
5. Disease of the lungs, including asthma.
6. Heart disease.
7. Muscular weakness or poor development.
8. Malnutrition, including anæmia.
9. Deformities, including feeble-minded.
10. Complications : two or more of the above.

The Juvenile Employment Officer, from the code number placed upon the school record, has a working knowledge of what occupation will be suitable and what unsuitable for the child concerned. In case of doubt as to whether or not any particular occupation would be unsuitable for a child in Groups 2 to 10, reference is made to the School Medical Officer. The following table shows the results of the examinations :—

Table 18.

EXAMINED FOR EMPLOYMENT.

Code No.	1	2	3	4	5	6	7	8	9	10	Total
Boys	516	92	4	...	4	3	2	...	6	...	627
Girls	509	109	16	...	6	5	...	3	2	7	657
Total	1025	201	20	...	10	8	2	3	8	7	1284

During 1924, six special cases were referred to the School Medical Officer by the Juvenile Employment Officer, as it appeared that the occupation desired by the child or its parents would be unsuitable. In one case medical examination confirmed this opinion, and a more suitable opening was chosen.

The number of children licensed for employment out of school hours at the end of the year was 354, consisting of 331 boys and 23 girls. This is an increase during the year of 37 boys and four girls. One hundred and forty-four boys and 27 girls were licensed to shopkeepers for the delivery of goods, 16 boys and six girls were employed on the market, 38 boys and eight girls in the delivery of milk, and 133 boys and two girls in the delivery of newspapers. They were licensed for two hours' work each school day and five hours on Saturday. Those who delivered milk were also allowed to work for two hours on Sundays. The two hours' work on school days were from 7 to 8 a.m. and 5 to 6 p.m., or from 5 to 7 p.m. One hundred and sixty-one boys and seven girls who had applied for registration for employment out of school hours were examined by an Assistant School Medical Officer, and all except six were recommended for the necessary certificates. Three were refused certificates because their vision was defective, and they had not obtained glasses for which a prescription had been issued at the Ophthalmic Clinic. They were told they would be registered for employment if they obtained the spectacles, but they did not do so. Other rejections were for valvular heart disease, tuberculosis of the elbow, and weak chest.

LICENSING OF CHILDREN FOR ENTERTAINMENTS.

Ten girls between 12 and 14 years of age and one boy 13 years residing and licensed in other towns were granted permission to take part in entertainments within the borough for the period of one week. The medical certificate for one of the girls having expired, she was re-examined by the School Medical Officer, and a new health certificate given. All the children appeared to be well cared for and in good health. The licenses, birth, medical, and school attendance certificates were produced and found to be in order. Their lodgings, which were inspected by an officer from the Department of the Medical Officer of Health, were found to be satisfactory.

The father of a girl residing in Blackburn was granted a license (valid for six months) for his daughter aged 13 years, to take part in entertainments both in Blackburn and in other towns. A school record book was required to be completed at the places she was engaged at, and to be returned at intervals to the Blackburn Juvenile Employment Committee for inspection.

MISCELLANEOUS.

EXAMINATION OF SCHOLARSHIP WINNERS.—Five boys and 24 girls who had been awarded scholarships were examined.

EDUCATION ON HEALTH.

Considerable attention continues to be paid to the need for inducing school-children to practice those habits of life which lead to good health. A certain number of the Head Teachers have used the " Health Rules " described in last year's report; these rules cannot, however, be adopted universally, as they require the co-operation of the parents, which is not always obtainable. The booklet, " Health Notes," and various leaflets have been distributed. Further series of health posters are being designed in the schools. A course of special talks to parents is being given in the schools by one of the Assistant School Medical Officers, Dr. Frazer. He gives a series of three lectures in adjacent schools, and repeats them in another district a few weeks later. The notices of the meetings are taken home by the children, and the Head Teachers have been very helpful in stimulating an interest in the lectures. The talks have attracted a type of audience which would not attend the lectures in the Public Hall. The titles of the addresses have been :—

1. " The Child—Its Growth and Development."
2. " How to Keep your Children Healthy."
3. " Common Ailments which affect Children of School Age."

The schools at which a lecture has been delivered are :—

Bangor Street.
Bank Top.
Cedar Street.
Griffin.
Mill Hill Council.
St. Alban's.
St. Anne's.
St. Andrew's.
St. Aidan's.
St. Michael's.
St. Mary's.
Wensley Fold.

The average attendance has been 32. The interest roused by these talks has been very great, and a long discussion, in which the lecturer has been requested to deal with all manner of questions about the health of school children, has invariably followed the formal lecture.

For the third year, courses of instruction in Mothercraft were given by the Health Visitors to the girls attending the Preston New Road Domestic Science School. Three addresses were given on the subjects :—

1. (a) "How to Bath and Dress a Baby"; (b) "Baby Clothing."
2. "The Feeding of a Baby during the First Nine Months of Life."
3. "General Welfare and Habits."

Seven courses, each of three lessons, were given during 1924, and each course was followed by a visit to one of the Child Welfare Centres. A similar course was given at the Blakey Moor Central School. The girls take a great interest in the lessons, and the essays written after the lessons showed an intelligent understanding of what had been taught.

DEATHS.

The deaths of 37 children of school age occurred during the year; there were 41 in 1923. Two of the 37 had never attended school owing to their physical condition. Included in the total are 12 deaths from pneumonia, five from tuberculosis, four from accidents, two from meningitis, two from rheumatism, one each from epilepsy, Hodgkin's Disease, peritonitis, cystitis, heart disease, diphtheria, scarlet fever, measles, appendicitis, otitis media, and tumour of the brain.

SECONDARY SCHOOLS.

The examinations at the High School and the Grammar School were confined in 1924 to (1) the routine inspection of those born in 1909 and 1912; (2) all scholars newly-admitted to the schools; and (3) special cases submitted because of suspected physical defects. One hundred and seventy-three children (166 girls and 7 small boys) were inspected at the High School and its preparatory branch, Crosshill; and 199 boys were inspected at the Grammar School.

The parents of 110 girls and 43 boys were present at the inspection.

The following table gives the results of the examinations :—

Table 19.

RETURN OF DEFECTS FOUND IN THE COURSE OF MEDICAL INSPECTION IN SECONDARY SCHOOLS DURING 1924.

DEFECT OR DISEASE.	ROUTINE INSPECTIONS.			
	BOYS		GIRLS	
	No. referred for treatment	No. requiring to be kept under observation but not referred for treatment	No. referred for treatment	No. requiring to be kept under observation but not referred for treatment
Number Examined	206		166	
Malnutrition	...	...	4	...
Uncleanliness :—				
Head	...	...	15	...
Body	...	...	...	...
Skin :—				
Impetigo	...	...	...	...
Other Diseases (Non-Tubercular).	...	...	1	...
Eye Diseases :—				
Defective Vision	24	17	11	1
Squint	1	...	...	...
External Eye Disease (Bleph.)	...	1	...	...
Ear Diseases :—			...	...
Ear Disease (Wax)	1	...	7	...
Defective Hearing	...	...	1	...
Nose and Throat :—				
Enlarged Tonsils	2	9	1	1
Adenoids	1	...	1	...
Other defects or Diseases of Nose or Throat	4	...	...	...
Enlarged Cervical Glands (Non-Tubercular)	...	1	...	...
Defective Speech	2	...	...	...
Teeth—Dental Defects	20	...	32	...
Heart and Circulation :—				
Organic	..	3	...	1
Functional	...	1	...	2
Anæmia	...	...	2	4
Lungs :—				
Bronchitis	2	1	...	...
Other Non-Tubercular Diseases	...	...	...	...
Tuberculosis (Pulmonary)	1	...	...	...
Nervous System :—				
Epilepsy	..	...	...	...
Chorea	...	...	...	...
Deformities :—				
Rickets	...	...	...	...
Spinal Curvature	9	...	9	...
Other Defects or Diseases	...	...	1	..

The percentage of boys in need of spectacles is larger than in the elementary schools; otherwise the defects found are, speaking generally, not so numerous as in the elementary schools. One boy was found to be suffering from active tuberculosis, and was admitted within a few days of the routine inspection to a sanatorium. The scholars were weighed and measured, and the average height and weight of the age-groups containing more than 40 children are as under :—

AVERAGE HEIGHT & WEIGHT, SECONDARY SCHOOL CHILDREN.

Boys.

Year of Birth.	No. Examined.	Height in Inches.	Weight in Pounds.
1909	73	60.9	95·7
1912	53	57·2	77·5

Girls.

Year of Birth.	No. Examined.	Height in Inches.	Weight in Pounds.
1913	41	57·7	80.5

The only comparable group of elementary school-children is that of boys born in 1912. Their average height was 54.8 inches and their weight 72lbs. The secondary school boys, therefore, show to considerable advantage. Eighty-seven boys and 63 girls were re-examined. The results were as under :—

Table 20.

CASES REFERRED FOR TREATMENT.

	Total		TREATED						Not Treated	
			Cured		Improved		Not Improved			
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Defective Vision ...	31	14	15	3	5	3	1	8	10	...
Decayed Teeth ...	17	18	8	6	5	7	...	...	4	5
Nose and Throat Defects	3	6	3	4	...	1	...	...	...	1
Ear Diseases—										
Deafness	1	...	...	...	1	...	...	...	...	...
Other Ear Diseases ...	2	3	...	1	...	2	1	...	1	...
Bronchitis	1	...	...	...	1	...	...	...	...	...
Spinal Curvature	4	2	1	1	3	1	...	...	...	...
Other Defects	1	1	...	...	1	1	...	...	...	...
	60	44	27	15	16	15	2	8	15	6

CASES TO BE KEPT UNDER OBSERVATION.

	Total		Referred fo Treatment		Still to be kept under observat'n		Not for further observation	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Defective Vision ...	12	10	5	...	3	5	4	5
Nose and Throat Defects	9	1	...	...	7	1	2	...
Ear Diseases—								
Deafness	...	1	...	...	...	1	...	...
Other Ear Diseases ...	1	...	1	...	...	...	...	...
Bronchitis	1	...	1	...	...	...	...	...
Heart Diseases—								
Organic	2	...	...	...	2	...	...	...
Functional	1	7	...	...	1	3	...	4
Tubercular Neck Glands	1	...	1	...	...	...	...	...
	27	19	8	...	13	10	6	9

The great majority of those found to require medical treatment obtained it from a private doctor or dentist, but a few of the scholarship children were treated at the Education Committee's clinics.